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PENNSYLVANIA RECREATION SURVEY

Prepared for:

The Commonwealth of Pennsylvania
Office of State Planning & Development
Harrisburg, Pennsylvania 17120

Prepared by:

Ide Associates, Inc.
7708 City Line Avenue
Philadelphia, Pennsylvania 19151

March, 1975

IDE ASSOCIATES INC. IDEA 7708 CITY LINE AVE. PHILADELPHIA, PA. 19151 215 TR8-5806 URBAN STUDIES

March 31, 1975

Mr. A. Edward Simon, Director
Office of State Planning & Development
Commonwealth of Pennsylvania
Box 1323
Harrisburg, Pennsylvania

Dear Mr. Simon:

I am pleased to submit this report, Pennsylvania Recreation Survey. The report concludes a project designed to provide a data base for the update of Pennsylvania's Recreation Plan.

The report presents findings, recommendations, and detailed analysis resulting from the first comprehensive survey of recreation activity to be conducted in Pennsylvania. The Pennsylvania Recreation Survey was a scientifically designed telephone survey of approximately 3,000 Pennsylvania households conducted in the months of June, July, and August, 1974. Information was obtained concerning participation in 19 recreation activities which generally are active and outdoor-oriented. The survey represents a departure from typical outdoor recreation survey designs used in the past in that non-outing, local recreation is given much greater coverage.

A special survey of the recreation activity of disabled or handicapped individuals was conducted concurrently with the main recreation survey. The principal findings and recommendations arising out of this special survey are also presented in this report.

We wish to acknowledge and express appreciation for the technical and substantive assistance provided by the staff of the Office of State Planning and Development and the Interagency Recreation Planning Task Force.

Sincerely,

Edward A. Ide

Edward A. Ide
President

IDE ASSOCIATES, INC.

EAI:sj

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PENNSYLVANIA RECREATION SURVEY
PRINCIPAL FINDINGS AND RECOMMENDATIONS

This report is based on a scientifically designed telephone survey of approximately 3,000 Pennsylvania households conducted in the months of June, July, and August, 1974, using WATS lines from a single location. The recreation participation in 19 outdoor-oriented activities was obtained for a randomly selected individual 5 years of age or older in each household. Interviewers worked from a computer-prepared listing of telephone numbers, each of which had an associated random number table which designated a particular person in an age-ordered listing of household members obtained at the start of the interview. If the designated individual was 10 years of age or older, that individual was interviewed on his/her recreation participation. If the individual was 5 to 9 years of age, an adult member of the household, generally the parent, was interviewed about that person's participation. In addition, a household head was interviewed to obtain attitudes on recreation and the socio-economic characteristics of the household.

For an active child or teenager, the interview approached an hour in length; for an elderly or infirm person with limited activity the interview took approximately 7 minutes. The findings presented in this summary are based upon a detailed examination of some 580 computer-prepared tables containing approximately 130,000 cells of data.

PARTICIPATION IN 19 RECREATION ACTIVITIES

Of the 19 recreation activities surveyed, 12 activities account for three or more days of participation per year per person 5 years of age or older. If a person participates

in an activity at all during a day it is counted as an activity day for that activity. The activity days per year per capita, the percent of population participating at least once during the year, and the activity days per person participating for the 19 surveyed activities ranked by activity days per capita are:

	Activity days per capita	Percent of population participating	Activity days per participant
bicycling	30.49	47.9	63.68
swimming	20.72	66.7	31.08
sightseeing or driving for pleasure	16.91	72.5	23.34
basketball	8.74	22.2	39.50
baseball or softball	7.84	32.4	24.24
hiking or nature walks	7.44	40.9	18.23
picnicking	6.13	70.6	8.69
tennis	5.10	24.0	21.28
fishing	4.68	31.9	14.65
golf or miniature golf	3.85	29.0	13.31
football	3.41	16.5	20.68
off-road motorcycling or riding snowmobiles	3.01	12.0	25.16
camping	2.86	26.3	10.86
boating, canoeing or waterskiing	2.58	30.7	8.42
hunting or sport shooting	2.23	14.0	15.90
horseback riding	1.96	11.1	17.61
ice skating	1.86	21.2	8.79
street hockey	1.12	4.6	24.20
snow skiing	0.36	4.9	7.30

The 20.72 activity days per capita for swimming translates to 229 million activity days for the estimated Pennsylvania population 5 and over of 11,054,000. In general, activity is presented in days per capita rather than in total days to facilitate comparison of the recreation participation of different segments of the population. The prevailing practice in state recreation plans of presenting millions of activity days rather than days per capita makes such comparisons very difficult.

Most state recreation plans, including previous Pennsylvania plans, have been based in part on subsets of data obtained from surveys conducted for the U.S. Bureau of

Outdoor Recreation. The activity days per capita obtained in the current study exceed dramatically those obtained in the 1972 U.S. Bureau of Outdoor Recreation study. The differences are partly accounted for by the fact that the current study covers a full year, whereas the 1972 study covered principally June, July, and August; the current study covers persons 5 years of age and over, whereas the 1972 study was restricted to persons 12 years of age and over; and the current study does not exclude indoor days, which account for 5.1% of activity days in the 19 surveyed activities. The principal reason for the differences, however, is that the 1972 study focused on characterizing vacations, trips, and outings, whereas the current study attempts to characterize all participation in each activity over the course of the year as well as the most recent participation in the activity. The greatest differences in participation rates between the two studies are for bicycling, 30.49 vs. 1.34 days per capita, swimming, 20.72 vs. 4.66 days per capita, and tennis, golf, and other outdoor games and sports, 30.06 vs. 3.03 days per capita.

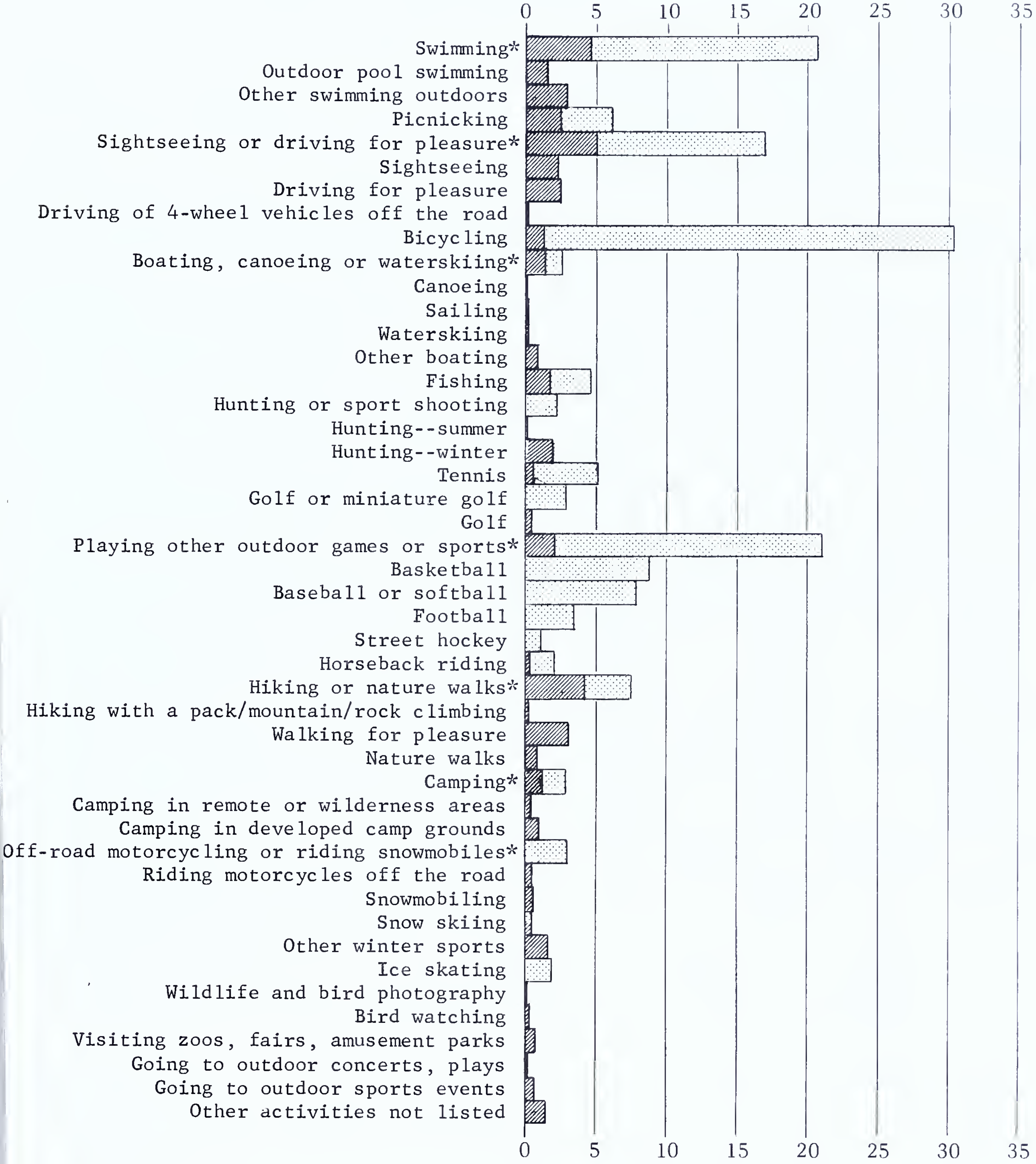
The dramatic differences suggest a need for review of recreation priorities nationally. For example, the proportion of activity days in bicycling is approximately 6 times that of 1972, and the proportion in all outdoor games and sports is 2.6 times that of 1972. In three other major groups of activities the proportion is half that of 1972, namely:

boating, canoeing or waterskiing
fishing, hunting, horseback riding, hiking and walking, camping, wildlife and bird photography, and bird watching
off-road motorcycling and winter sports.

It may be noted that pool swimming constituted 34.5% of swimming activity in the 1972 study whereas it is estimated at 74.4%, based on the most recent participation, in the current study, indicating that pool swimming is relatively twice as important as in the earlier study.

Chart 1

RECREATION ACTIVITY DAYS PER CAPITA, U.S., 1972, BY AUDITS & SURVEYS; AND PENNSYLVANIA, 1974, BY IDE ASSOCIATES



* A composite activity with sub-activity detail shown

▨ Summer or winter, 1972, 12 years and over, U.S., by Audits & Surveys for U.S. Bureau of Outdoor Recreation

░ 365 days prior to interview, 1974, 5 years and over, Pa., by Ide Associates for Pennsylvania Office of State Planning and Development

Table 1

RECREATION PARTICIPATION, 1972 (U.S., AUDITS & SURVEYS)[1] AND 1974 (PENNSYLVANIA, IDE ASSOCIATES)[2]

Activity	Percent of population participating		Activity days per participant		Activity days[3] per capita	
	A & S	Ide	A & S	Ide	A & S	Ide
All listed activities					34.08	131.29
Swimming		66.7		31.08	4.66	20.72
Outdoor pool swimming	17.8		9.0		1.61	
Other swimming outdoors	33.7		9.0		3.05	
Picnicking	46.5	70.6	5.4	8.69	2.53	6.13
Sightseeing or driving for pleasure		72.5		23.34	4.97	16.91
Sightseeing	37.4		6.1		2.27	
Driving for pleasure	34.1		7.4		2.53	
Driving of 4-wheel vehicles off the road	1.8		9.2		0.17	
Bicycling	10.4	47.9[4]	12.9	63.68[4]	1.34	30.49[4]
Boating, canoeing or waterskiing		30.7		8.42	1.44	2.58
Canoeing	2.9		4.1		0.11	
Sailing	2.6		7.9		0.20	
Waterskiing	5.3		6.4		0.34	
Other boating	14.6		5.4		0.79	
Fishing	23.8	31.9	7.3	14.65	1.74	4.68
Hunting or sport shooting		14.0		15.90		2.23
Hunting--summer	2.6		4.3		0.11	
Hunting--winter	13.9		13.5		1.87	
Tennis	5.4	24.0	9.5	21.28	0.51	5.10
Golf or miniature golf		29.0		13.31		3.85
Golf	4.8		8.2		0.40	
Playing other outdoor games or sports	21.9		9.7		2.12	21.11
Basketball		22.2		39.50		8.74
Baseball or softball		32.4		24.24		7.84
Football		16.5		20.68		3.41
Street hockey		4.6		24.20		1.12
Horseback riding	5.4	11.1	5.9	17.61	0.32	1.96
Hiking or nature walks		40.9		18.23	4.31	7.44
Hiking with a pack/mountain/rock climbing	5.4		5.2		0.28	
Walking for pleasure	33.9		9.2		3.10	
Nature walks	16.7		5.6		0.93	
Camping		26.3		10.86	1.32	2.86
Camping in remote or wilderness areas	4.8		7.5		0.36	
Camping in developed camp grounds	10.9		8.8		0.96	

Table 1, continued

RECREATION PARTICIPATION, 1972 (U.S., AUDITS & SURVEYS)[1] AND 1974 (PENNSYLVANIA, IDE ASSOCIATES)[2]

Activity	Percent of population participating		Activity days per participant		Activity days per capita[3]	
	A & S	Ide	A & S	Ide	A & S	Ide
Off-road motorcycling or riding snowmobiles ...		12.0		25.16	1.01	3.01
Riding motorcycles off the road	4.5		7.8		0.36	
Snowmobiling					0.65	
Snow skiing	4.5	4.9	8.1	7.30	0.36	0.36
Other winter sports	15.5				1.62	
Ice skating		21.2		8.79		1.86
Wildlife and bird photography	2.0		6.2		0.12	
Bird watching	3.9		6.6		0.26	
Visiting zoos, fairs, amusement parks	24.2		3.2		0.77	
Visiting a museum or zoo[5]		5.3				
Going to outdoor concert, plays	6.5		2.5		0.17	
Attending a cultural event or concert[5]		6.7				
Going to outdoor sports events	11.8		5.1		0.61	
Attending a live amatuer or professional sporting event[5]		12.2				
Other activities not listed	24.2		6.4		1.52	

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[1] Persons 12 years old and over. Based on a home interview survey of approximately 4,000 persons drawn from the non-institutionalized population of the conterminous United States. Data covers participation during June, July, and August 1972, except figures for hunting, snow skiing, snowmobiling, and other winter sports which reflect participation during the period from September 1971 through May 1972. Survey conducted for the U. S. Bureau of Outdoor Recreation. Source: Computed from data presented in the Statistical Abstract of The United States, 1973, p 208 and Outdoor Recreation--A Legacy for America, A Summary of Outdoor Recreation in America, 1972-1978, p 4, and Table 2-2, pp 42-51, in Appendix "A", An Economic Analysis.

[2] Persons 5 years and over. Based on a telephone survey of approximately 3,000 individuals conducted during the months of June, July, and August, 1974, and covering the 365 days prior to the interview. Includes indoor participation. Survey conducted for the Office of State Planning and Development, Commonwealth of Pennsylvania.

[3] Total activity days divided by the total population. Activity days are the number of different days per year on which an activity occurs regardless of the time spent in the activity. Note that if several activities are engaged in on a single day, each contributes a full day to the activity day total even though one or more may account for only a few minutes actual time.

[4] Includes an unknown amount of non-recreational bicycling.

[5] Obtained only for the Saturday or Sunday immediately preceding the interview, so that summer or annual participation is not available.

First-time participation

One indicator of the rate at which participation in an activity is growing is given by the fraction of the population who participated in the activity for the first time during the previous year. Of the 19 surveyed activities, there are 8 activities for which the number of individuals who participated in the activity for the first time in the previous 12 months was in excess of 1 percent of the total population 5 years and older. The activities and the associated percent of the population 5 years and older who participated for the first time are as follows:

boating, canoeing or waterskiing	2.58%
tennis	2.44
off-road motorcycling or snowmobiling	2.08
camping	1.96
ice skating	1.67
snow skiing	1.06
horseback riding	1.05
golf or miniature golf	1.00.

Thus, for example, approximately 1 in 50 persons 5 years and older participated in camping for the first time in the previous 12 months.

The rate of growth of an activity is also related to the percent of participants in the activity who participated for the first time in the previous 12 months. The 8 activities which show the highest percentages of first-time participants are:

snow skiing	21.60%
street hockey	19.05
off-road motorcycling or snowmobiling	17.32
tennis	10.16
horseback riding	9.48
boating, canoeing or waterskiing	8.42
ice skating	7.85
camping	7.43.

Thus, for example, slightly more than a tenth of persons who played tennis in the past year played for the first time during the year.

An indicator of potential growth is the ratio of the number of interested nonparticipants to participants. The 8 activities with the highest ratios are:

snow skiing	1.95
horseback riding	1.45
off-road motorcycling or snowmobiling	.77
camping	.53
tennis	.48
boating, canoeing, waterskiing	.44
ice skating	.41
street hockey	.38.

For example, there are nearly two nonskiers who state they are interested in participating in skiing for each person who skied one or more times in the past year. The fraction of interested persons who will actually become skiers is, of course, unknown.

Kind of place

For 17 of the 19 surveyed activities (bicycling and sightseeing or driving for pleasure are excluded) an estimated 48.4% of activity days away from home occurred at public places, 41.3% at private places, 8.2% at commercial places, and 2.1% at nonprofit or quasi-public places. (See Table 2) Within the public sector, public schools or universities accounted for 20.6%, neighborhood facilities for 6.8%, municipal or county for 42.0%, state for 29.1%, and national for 1.5%.

Public schools, neighborhood parks or playgrounds, and municipal or county parks have above average importance to basketball, baseball or softball, tennis, fishing, football, ice skating, and street hockey. State and national parks and lands have above average importance for hiking or nature walks, picnicking, fishing, camping, boating, canoeing or waterskiing, and hunting or sport shooting. Private facilities are more important for swimming, football, off-road motorcycling or snowmobiling, hunting or sport shooting, horseback riding, and street hockey; commercial facilities, for golf or miniature golf, camping, boating, canoeing or waterskiing, hunting or sport shooting, horseback riding, and street hockey; nonprofit, for swimming, hiking or nature walks, and camping.

Table 2

RECREATION PARTICIPATION BY DETAILED OWNERSHIP OF PLACE OF MOST RECENT PARTICIPATION, TOTAL 17 ACTIVITIES

(In percent)

	Participants		Activity days	
	Percent of total	Percent of sub-total	Percent of total	Percent of sub-total
All places	100.0		100.0	
Public	51.0	100.0	48.4	100.0
Public school or university	6.7	13.2	10.0	20.6
Neighborhood	2.3	4.5	3.3	6.8
Municipal or county	20.8	40.8	20.3	42.0
State	20.2	39.6	14.1	29.1
National	0.9	1.8	0.7	1.5
Private	34.1	100.0	41.3	100.0
Subject's home, lands, or vacation home/streets by home	11.7	34.4	17.5	42.3
Home or lands of private individual other than subject	13.5	39.5	11.6	28.2
Private club--swim club, country club, yacht club, etc.	5.7	16.8	8.5	20.6
Private camp, day or overnight	1.2	3.5	1.0	2.5
Apartment complex, housing development, mobile home park	0.4	1.3	0.8	1.9
Private school or university	0.7	2.1	1.0	2.4
Lands or holdings of a business corporation or public utility	0.8	2.5	0.9	2.2
Commercial	12.9	100.0	8.2	100.0
Health spa, commercial athletic club	0.1	0.7	0.1	1.6
Resort hotel, overnight motel	1.9	14.4	1.2	14.8
Commercial golf course, skiing area, campground, stables, etc.	11.0	84.8	6.9	83.6
Nonprofit, Quasi-public	2.0	100.0	2.1	100.0
Camp, sponsored by nonprofit agency, day or overnight	0.6	31.4	0.5	23.3
YMCA, YWCA, YMHA, YWHA, Boy's club, Little League, etc.	0.6	32.7	1.1	54.3
Church, synagogue, other religious facility	0.6	31.7	0.4	20.0
Historical or horticultural society, zoo, botanical garden	0.1	4.2	0.1	2.4

Table 3
RECREATION PARTICIPATION BY CLASS OF OWNERSHIP FOR 17 ACTIVITIES

		Participants							Activity days						
	All places	Public, total	School, local	State	National	Private	Commercial	Nonprofit	Public, total	School, local	State	National	Private	Commercial	Nonprofit
Total 17 activities	100.0	51.0	29.8	20.2	0.9	34.1	12.9	2.0	48.4	33.6	14.1	0.7	41.3	8.2	2.1
Swimming	100.0	44.0	29.3	14.2	0.5	44.7	8.5	2.8	37.6	27.4	9.6	0.5	53.6	6.2	2.7
Basketball	100.0	55.2	54.0	1.2	0.0	40.6	1.8	2.4	62.2	59.5	2.7	0.0	35.7	0.6	1.5
Baseball or softball ..	100.0	59.5	55.1	3.9	0.5	37.1	1.7	1.7	63.3	59.8	3.3	0.2	31.4	1.2	4.1
Hiking or nature walks	100.0	62.7	23.6	36.6	2.5	30.9	3.8	2.6	58.9	28.4	29.2	1.3	35.7	3.1	2.3
Picnicking	100.0	66.5	26.6	39.0	0.9	24.7	7.2	1.6	65.1	22.4	41.7	1.0	25.6	7.6	1.7
Tennis	100.0	75.1	73.0	1.9	0.2	20.7	3.3	0.8	71.4	69.6	1.8	0.0	23.9	3.2	1.5
Fishing	100.0	65.2	31.6	32.4	1.2	28.0	6.4	0.5	68.2	29.1	37.1	2.0	27.3	4.0	0.5
Golf or miniature golf	100.0	10.5	10.0	0.3	0.2	15.8	73.7	0.0	11.7	11.4	0.2	0.1	34.2	54.1	0.0
Football	100.0	46.8	45.0	1.4	0.3	52.1	0.0	1.1	48.2	46.6	1.4	0.3	51.2	0.0	0.6
Off-road motorcycling, riding snowmobiles .	100.0	23.2	11.6	11.4	0.3	70.5	6.3	0.0	21.7	11.1	10.2	0.4	75.8	2.5	0.0
Camping	100.0	45.2	3.5	38.9	2.7	24.7	21.9	8.2	34.1	2.2	30.0	1.9	28.1	26.9	10.8
Boating, canoeing or waterskiing	100.0	59.9	24.3	34.2	1.5	27.3	10.8	2.0	56.4	24.0	30.7	1.6	33.1	9.5	0.9
Hunting or sport shooting	100.0	29.7	1.1	26.7	1.9	67.2	1.9	1.1	26.1	1.2	20.8	4.1	70.9	1.2	1.8
Horseback riding	100.0	11.1	6.5	3.3	1.3	56.5	32.1	0.3	2.7	1.2	1.2	0.2	73.6	23.7	0.1
Ice skating	100.0	49.3	42.9	6.4	0.0	29.9	19.5	1.3	46.5	37.4	9.2	0.0	32.5	19.4	1.5
Street hockey	100.0	37.5	37.5	0.0	0.0	59.4	2.0	1.0	44.5	44.5	0.0	0.0	54.5	0.8	0.2
Snow skiing	100.0	10.8	4.3	6.6	0.0	15.0	74.1	0.0	9.0	2.9	6.1	0.0	9.9	81.0	0.0

Recreation facility capacity limitations

For an estimated 13.9% of the activity days associated with the 17 activities for which kind of place information was obtained, the participant was inconvenienced or bothered by overcrowding. Five activities show a percentage of activity days associated with crowding which is greater than the percentage across all activities:

tennis	46.4%
snow skiing	35.3
ice skating	26.4
golf	19.2
swimming	14.2.

The activities listed above are the activities most constrained currently by limitations in the capacity of recreation facilities.

Note that although participation in snow skiing, on the one hand, is highly constrained by limitations in capacity, only a very small fraction of all recreation activity days are devoted to snow skiing. Providing additional snow skiing facilities, therefore, could result in a large increase in snow skiing participation but could produce only a very small increase in total recreation activity. Swimming, on the other hand, accounts for more than 50 times as many activity days as does snow skiing. Thus, even though swimming participation is relatively less constrained by capacity limitations, providing additional swimming facilities could result in appreciable increases in total recreation activity.

To see which kinds of additional capacity could be expected to have the greatest impact on total recreation activity, it is necessary to weight the measures of capacity limitation as given above by the proportion of total recreation activity which is devoted to the particular activity. The results, given as percentages of activity days distributed among the 17 activities and adding to 100%, follow:

swimming	25.2%
tennis	23.5
basketball	8.5
picnicking	7.7
golf	7.6
ice skating	4.7
baseball or softball	4.6
fishing	4.0
camping	3.2
hiking or nature walks	2.8
boating, canoeing or waterskiing	2.5
football	2.3
hunting or sport shooting	1.5
snow skiing	1.1
horseback riding	0.6
street hockey	0.2
off-road motorcycling or snowmobiling	0.03.

The foregoing percentages may be viewed as priority indicators among activities of the need for additional capacity. It should be noted, however, that the ranking does not take account of differences among activities in the cost of providing for additional activity days, nor does it take account of the differential accessibility of facilities.

Distance of place from home

For the 17 surveyed activities for which kind of place data were obtained, approximately three-quarters of activity days for recreation away from home are accounted for by places located within a half an hour from home.

Table 4

AWAY FROM HOME RECREATION PARTICIPATION BY TRAVEL TIME ONE-WAY, MOST RECENT OCCASION, 17 ACTIVITIES

(In percent)

Travel time one-way	Participants		Activity days	
	%	Cum.	%	Cum.
Total	100.0		100.0	
Less than 5 minutes	7.8	7.8	13.8	13.8
5 minutes	11.8	19.6	17.5	31.3
6 to 14 minutes	13.7	33.3	15.2	46.5
15 minutes	9.9	43.2	10.4	56.9
16 to 29 minutes	10.3	53.5	10.0	66.9
30 minutes	10.5	64.0	7.9	74.8
31 to 59 minutes	6.3	70.3	4.8	79.6
1 hour	7.8	78.1	5.2	84.8
61 minutes to 1 hour 59 minutes	5.1	83.2	3.3	88.1
2 hours to 3 hours 59 minutes	10.2	93.4	7.0	95.1
4 hours to 7 hours 59 minutes	3.8	97.2	2.3	97.4
8 hours or longer	2.8	100.0	2.6	100.0

The effect of distance of facilities on recreation participation was investigated by asking respondents what would be the effect if the places where they participate away from home were located only half as far away as they actually are. Would the respondent participate much more often, slightly more often, or about as often as now? The proportion of activity days for an activity which are associated with "more often" responses gives a measure of the extent to which participation in the activity is constrained by distance of facilities.

For an estimated 16.7% of the activity days associated with the same 17 activities, participation was constrained by distance of facilities. Nine activities show a higher-than-average percentage of activity days suffering from distance constraints:

snow skiing	44.2%
boating, canoeing or waterskiing	36.3
camping................	31.4
picnicking	27.6
fishing	27.1
ice skating	20.9
swimming	19.8
horseback riding	18.1
hiking or nature walks	18.0.

The activities listed above are the activities which would be expected to experience a greater-than-average expansion in activity days as a result of reducing distance of facilities as distinct from adding capacity.

The percentages above indicate which activities would experience the greatest expansion as a result of reducing distance of facilities. To see for which activities reducing distance of facilities would have the greatest impact on total recreation activity, it is necessary to weight the percentages above by the proportion of total recreation activity which is devoted to the particular activity. Such weighting shows that the activities for which increased proximity of facilities would have the greatest impact on total recreation activity are, in order of decreasing relative importance: swimming, picnicking, hiking or nature walks, fishing, boating, canoeing, or waterskiing, and camping.

Table 5
EFFECT OF DISTANCE OF FACILITY ON RECREATION ACTIVITY DAYS PER CAPITA, 17 ACTIVITIES

Activity	Total days per capita	More than 15 minutes away from home	Would participate much more often	Would participate slightly more often	Total more often		
					Days per capita	In percent	Percent of total days per capita
All 17 activities	83.89	36.18	8.34	5.67	14.01	100.0	16.7
Swimming	20.72	8.78	2.61	1.50	4.11	29.3	19.8
Picnicking	6.13	4.64	0.98	0.71	1.69	12.1	27.6
Hiking or nature walks ...	7.44	3.77	0.73	0.61	1.34	9.6	18.0
Fishing	4.68	3.15	0.88	0.39	1.27	9.0	27.1
Boating, canoeing or waterskiing	2.58	2.00	0.60	0.34	0.94	6.7	36.3
Camping	2.86	2.59	0.55	0.34	0.90	6.4	31.4
Baseball or softball	7.84	1.84	0.29	0.42	0.71	5.1	9.0
Basketball	8.74	1.86	0.16	0.42	0.58	4.2	6.7
Golf or miniature golf ...	3.85	2.24	0.22	0.25	0.47	3.3	12.2
Ice skating	1.86	0.73	0.19	0.20	0.39	2.8	20.9
Tennis	5.10	1.11	0.23	0.13	0.36	2.6	7.1
Horseback riding	1.96	0.70	0.26	0.09	0.35	2.5	18.1
Hunting or sport shooting	2.23	1.16	0.22	0.13	0.35	2.5	15.7
Off-road motorcycling or snowmobiling	3.01	0.82	0.20	0.05	0.25	1.7	8.1
Snow skiing	0.36	0.27	0.11	0.05	0.16	1.1	44.2
Football	3.41	0.47	0.09	0.03	0.11	0.8	3.4
Street hockey	1.12	0.05	0.02	0.02	0.04	0.3	3.3

We have presented two priority lists showing which activities represent the largest components of constraint of total recreation activity resulting from limited availability of facilities. The list on page 12 is based on constraint due to over-crowding and the list in Table 5 is based on constraint due to excessive distance to facilities. Observe that swimming appears at the top of both lists, indicating that the highest priority should be given to expanding the availability of swimming facilities. The only other activity which appears near the top of both lists is picnicking.

THE RECREATIONALLY DISADVANTAGED

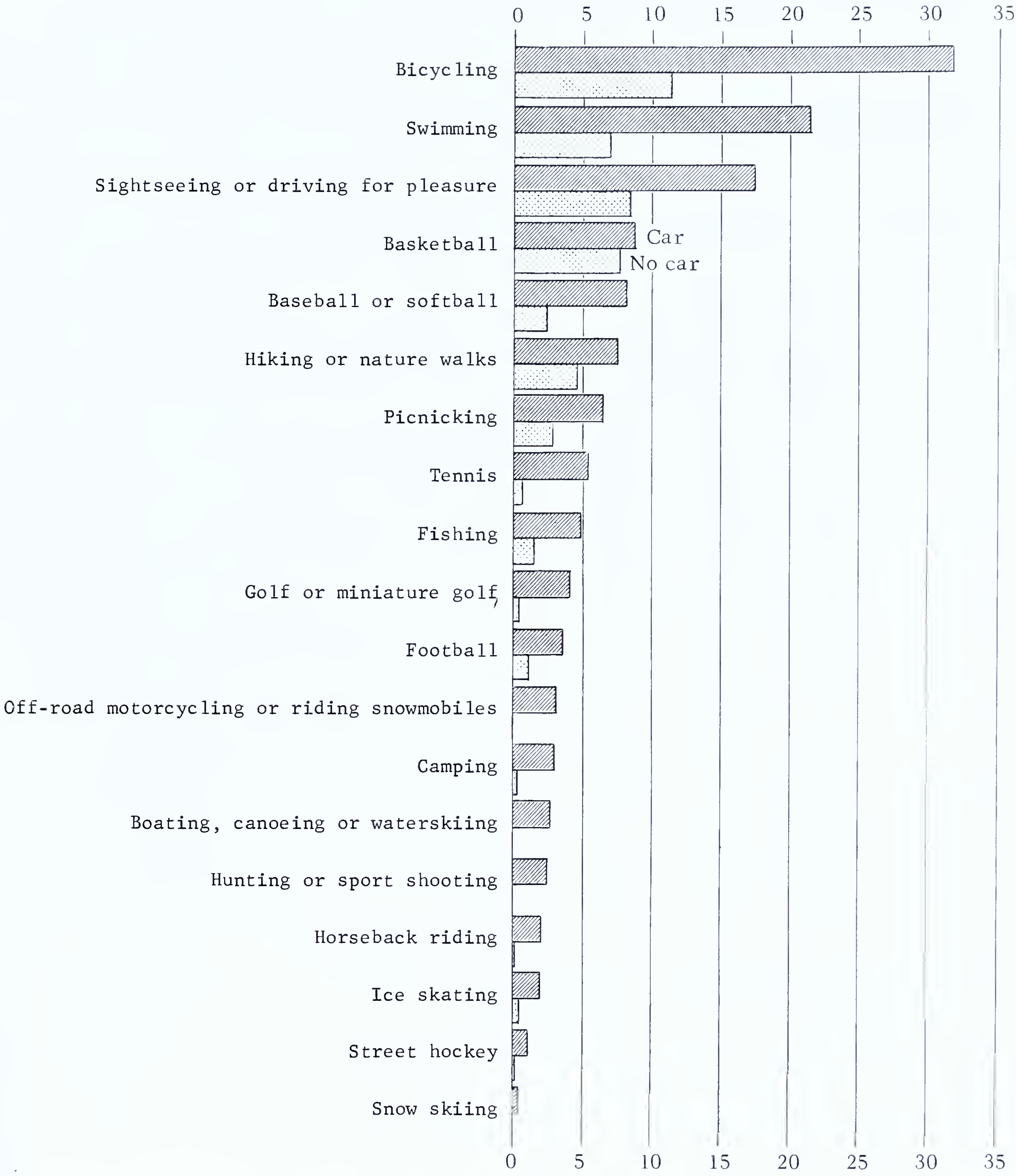
There is strong evidence to suggest that certain subgroups of the population are deprived of access to recreation. Particularly disadvantaged subgroups are: individuals in noncar-owning households, individuals in low-income households, nonwhites, females, the elderly, and the handicapped. Moreover, persons living in high population density places are disadvantaged with respect to rural or wilderness type activities.

All of the above groups have considerably lower recreation participation rates compared to other groups in the population. Moreover, it is clear that the lower participation rates for the disadvantaged subgroups are not the result of a lack of interest in recreation or a diminished desire to participate. It should be noted that the survey results understate the degree of disadvantage since the most isolated and disadvantaged population segments are least likely to have a telephone. Also, the survey results presented do not show the effect of multiple disadvantages.

In what follows, comparisons of actual participation are made in terms of activity days per capita. Of course, low actual participation is not of itself evidence of deprivation. Deprivation is indicated, however, for groups with low actual participation who also have expressed a high level of interest in participation relative to actual participation. Thus, the extent to which recreation interests are unsatisfied may be measured by the number of interested nonparticipants as a percent of the number of current participants.

Chart 2

RECREATION ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, PENNSYLVANIA, CAR-OWNING AND NONCAR-OWNING HOUSEHOLDS, 1974



Individuals in noncar-owning households

Recreation participation is dramatically lower for individuals in noncar-owning households than it is for those in car-owning households. Across all 19 surveyed activities, the total annual participation of individuals in noncar-owning households is only 50.14 activity days per capita, compared to 136.64 activity days per capita for those in car-owning households.

Table 6

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY CAR OWNERSHIP IN HOUSEHOLD, PENNSYLVANIA, 1974

	Population 5 and over	Own a car	No car
All activities	131.29	136.64	50.14
Bicycling	30.49	31.75	11.40
Swimming	20.72	21.63	7.04
Sightseeing or driving for pleasure	16.91	17.46	8.49
Basketball	8.74	8.81	7.72
Baseball or softball	7.84	8.19	2.50
Hiking or nature walks	7.44	7.62	4.74
Picnicking	6.13	6.35	2.84
Tennis	5.10	5.40	0.65
Fishing	4.68	4.89	1.52
Golf or miniature golf	3.85	4.08	0.45
Football	3.41	3.56	1.14
Off-road motorcycling or riding snowmobiles	3.01	3.20	0.08
Camping	2.86	3.03	0.29
Boating, canoeing or waterskiing ...	2.58	2.72	0.52
Hunting or sport shooting	2.23	2.37	0.01
Horseback riding	1.96	2.08	0.16
Ice skating	1.86	1.96	0.44
Street hockey	1.12	1.18	0.17
Snow skiing	0.36	0.38	0.00

Moreover, for each of the 19 surveyed activities considered separately, the participation for individuals in noncar-owning households is lower than it is for those in car-owning households. In four activities participation among individuals in noncar-owning households virtually disappears, namely: off-road motorcycling or riding snowmobiles, boating, canoeing or waterskiing, hunting or sport shooting, and snow skiing.

The lower participation rates of individuals in noncar-owning households are not the result of lack of interest in recreation. For each of the 19 surveyed activities, the level of unsatisfied recreation interest, as measured by the number of interested nonparticipants as a percent of the number of current participants, is considerably higher among individuals in noncar-owning households than among those in car-owning households. For example, for each individual in a noncar-owning household who participated in camping in the past year, there are another 2.5 who are interested in participating in camping. The corresponding figure for camping among individuals in car-owning households is only 0.5.

Table 7

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY CAR OWNERSHIP IN HOUSEHOLD, PENNSYLVANIA, 1974

(Interested nonparticipants as a percent of current participants)

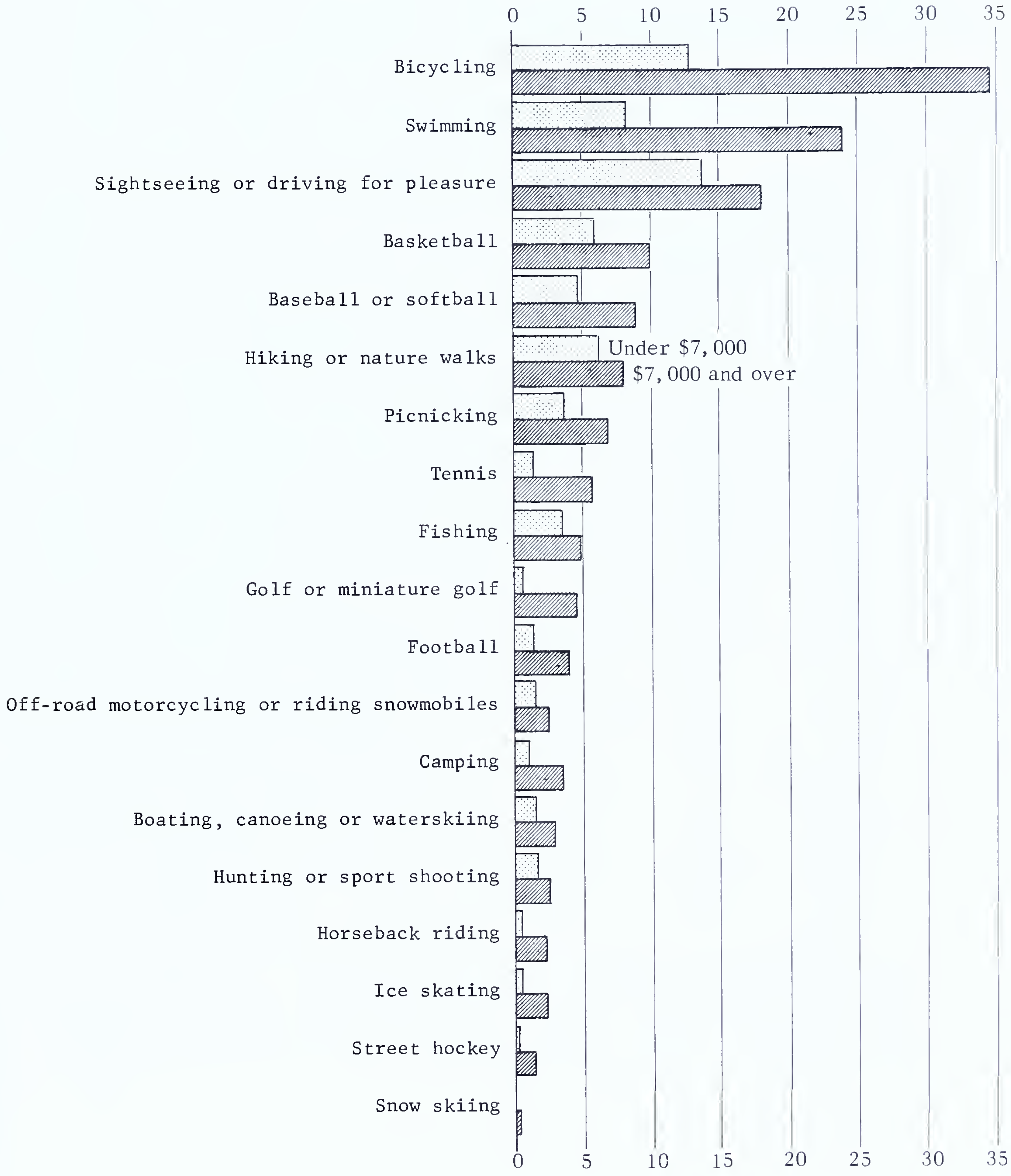
	Own a car	No car
Bicycling	13.3	36.0
Swimming	4.3	23.4
Sightseeing or driving for pleasure	2.9	17.9
Basketball	19.0	39.1
Baseball or softball	11.1	52.1
Hiking or nature walks	17.3	31.5
Picnicking	4.2	10.7
Tennis	46.3	186.4
Fishing	27.4	95.8
Golf or miniature golf	24.9	86.8
Football	18.4	60.6
Off-road motorcycling or riding snowmobiles	75.5	250.0
Camping	51.1	248.0
Boating, canoeing or waterskiing .	42.7	106.0
Hunting or sport shooting	38.1	475.0
Horseback riding	143.8	200.0
Ice skating	40.2	118.8
Street hockey	34.2	400.0
Snow skiing	190.4	---

It is true, no doubt, that car-ownership effects are to some extent confounded with age and income effects. Noncar-owning households include a concentration of elderly and low-income individuals. However, the evidences of deprivation among individuals in noncar-owning households are more pronounced than they are for either elderly or low-income individuals considered separately, indicating that car-ownership itself is a major determinant of access to recreation.

In fact, in outing type activities the recreational deprivation of individuals in noncar-owning households is comparable to that of individuals having 1 or more of 8 specified disability conditions, namely: confined to a wheelchair, required to use braces, crutches or a walker, blind or nearly blind, deaf or nearly deaf, having a coordination disability such as palsy, having a heart or lung disability which limits activity, being emotionally disturbed, or mentally retarded. Both noncar-owners and handicapped persons each participated at least once in an average of 1.5 of the outing type activities in the previous year compared to 3.7 for all persons 5 and over. The activities included as outing type activities are: swimming, picnicking, boating, canoeing or waterskiing, fishing, hunting or sport shooting, hiking or nature walks, camping, off-road motorcycling or riding snowmobiles, sightseeing or driving for pleasure, and snow skiing.

Chart 3

RECREATION ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, PENNSYLVANIA, BY FAMILY INCOME, 1974



Individuals in low-income households

Recreation participation is considerably lower for individuals in low-income households than for those in higher-income households. Across all 19 surveyed activities, the total annual participation of individuals in households with total annual incomes under $7,000 is 68.68 activity days per capita, compared to 147.50 activity days per capita for those in households with incomes of $7,000 or more.

Table 8

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY TOTAL FAMILY INCOME, PENNSYLVANIA, 1974

	Population 5 and over	Total family income	
		Under $7,000	$7,000 and over
All activities	131.29	68.68	147.50
Bicycling	30.49	12.84	34.71
Swimming	20.72	8.24	23.81
Sightseeing or driving for pleasure	16.91	13.68	17.99
Basketball	8.74	5.81	9.79
Baseball or softball	7.84	4.68	8.78
Hiking or nature walks	7.44	6.09	7.96
Picnicking	6.13	3.65	6.77
Tennis	5.10	1.54	5.74
Fishing	4.68	3.40	4.91
Golf or miniature golf	3.85	0.64	4.48
Football	3.41	1.40	3.99
Off-road motorcycling or riding snowmobiles	3.01	1.52	3.51
Camping	2.86	1.00	3.40
Boating, canoeing or waterskiing	2.58	1.39	2.98
Hunting or sport shooting ..	2.23	1.61	2.35
Horseback riding	1.96	0.41	2.30
Ice skating	1.86	0.48	2.25
Street hockey	1.12	0.18	1.35
Snow skiing	0.36	0.13	0.42

Moreover, for each of the 19 surveyed activities considered separately, the participation for individuals in low-income households (under $7,000) is lower than it is for those in higher-income households ($7,000 or more). $7,000 was chosen as the dividing point on the income scale because recreation participation in the $4,000 to $6,999 class is 41.9% below average participation, whereas participation in the $7,000 to $9,999 class is only 7.2% below average.

The levels of unsatisfied recreation interest, as measured by the number of interested nonparticipants as a percent of the number of current participants, are higher for 16 of the 19 surveyed activities for individuals in low-income households than they are for individuals in higher-income households. The 3 exceptions are picnicking, basketball, and hiking or nature walks.

Table 9

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY TOTAL FAMILY INCOME, PENNSYLVANIA, 1974

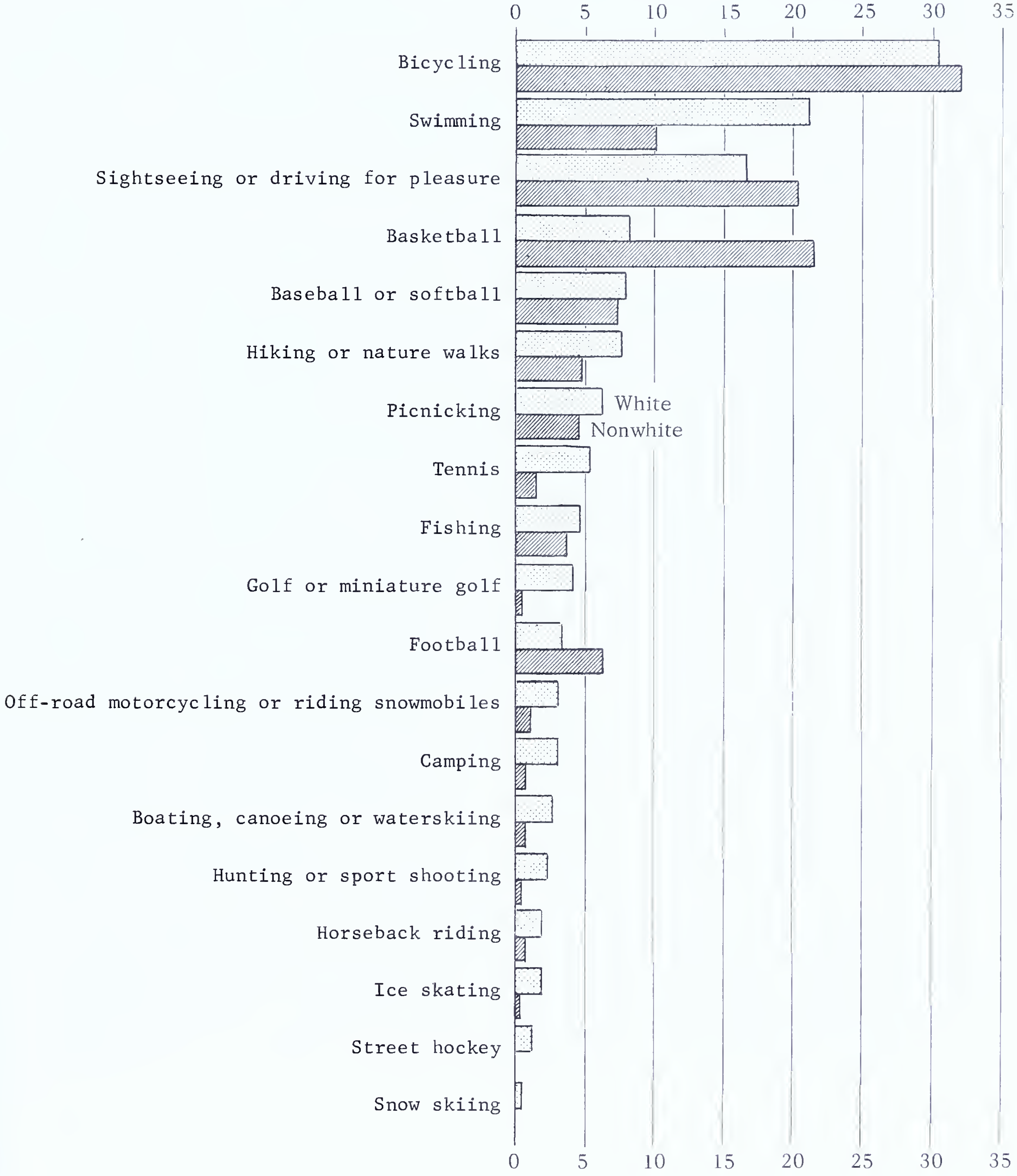
(Interested nonparticipants as a percent of current participants)

	Under $7,000	$7,000 and over
Bicycling	17.4	13.2
Swimming	11.2	4.1
Sightseeing or driving for pleasure	6.1	3.0
Basketball	16.5	19.1
Baseball or softball	14.5	11.0
Hiking or nature walks	16.9	17.2
Picnicking	4.3	4.3
Tennis	51.6	47.7
Fishing	45.9	27.8
Golf or miniature golf	62.8	24.1
Football	29.7	18.7
Off-road motorcycling or riding snowmobiles	96.6	73.5
Camping	66.0	51.7
Boating, canoeing or waterskiing	63.9	42.3
Hunting or sport shooting	42.3	37.7
Horseback riding	177.8	150.1
Ice skating	60.8	40.6
Street hockey	44.4	33.7
Snow skiing	243.8	194.9

Although individuals in low-income households appear to be deprived of access to recreation, their deprivation apparently is not so severe as it is for individuals in noncar-owning households. In other words, lack of car-ownership appears to be a generally stronger determinant of access to recreation than is income.

Chart 4

RECREATION ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, PENNSYLVANIA, WHITE AND NONWHITE, 1974



Nonwhites

Across all 19 surveyed activities, the total recreation participation of nonwhite individuals is 116.19 activity days per capita, compared to 132.11 activity days per capita for white individuals.

Table 10

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY RACE, PENNSYLVANIA, 1974

	Population 5 and over	White	Non-white
All activities	131.29	132.11	116.19
Bicycling	30.49	30.39	32.14
Swimming	20.72	21.21	10.11
Sightseeing or driving for pleasure	16.91	16.75	20.28
Basketball	8.74	8.14	21.52
Baseball or softball	7.84	7.88	7.26
Hiking or nature walks ..	7.44	7.59	4.69
Picnicking	6.13	6.22	4.49
Tennis	5.10	5.30	1.39
Fishing	4.68	4.74	3.73
Golf or miniature golf ...	3.85	4.03	0.44
Football	3.41	3.28	6.21
Off-road motorcycling or riding snowmobiles ..	3.01	3.11	1.12
Camping	2.86	2.97	0.75
Boating, canoeing or waterskiing	2.58	2.67	0.70
Hunting or sport shooting .	2.23	2.33	0.37
Horseback riding	1.96	2.02	0.71
Ice skating	1.86	1.93	0.30
Street hockey	1.12	1.18	0.00
Snow skiing	0.36	0.38	0.00

Moreover, for 15 of the 19 activities considered separately, participation by nonwhites is lower than by whites. The 4 exceptions are basketball, football, bicycling, and sightseeing or driving for pleasure, with basketball being the one activity for which participation by nonwhites is significantly greater than is participation by whites.

The participation rates for nonwhites are lower than for whites, but not overwhelmingly so. However, the participation rates do not tell the whole story.

The level of unsatisfied recreation interest (interested nonparticipants as a percent of current participants) among nonwhites is much higher for many of the activities than it is among whites.

Table 11

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY RACE, PENNSYLVANIA, 1974

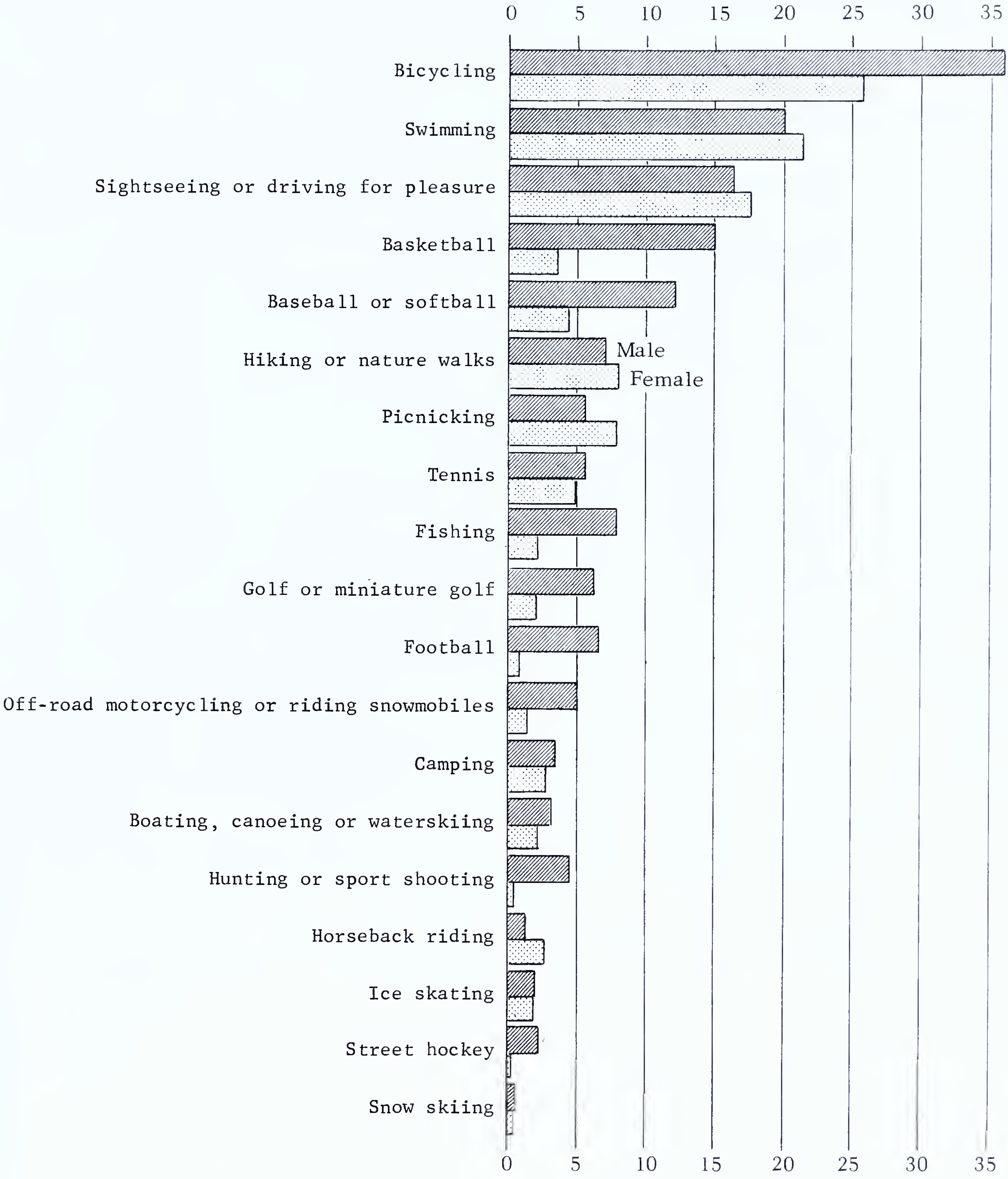
(Interested nonparticipants as a percent of current participants)

	White	Non-white
Bicycling	13.6	16.9
Swimming	4.5	8.3
Sightseeing or driving for pleasure	3.3	8.2
Basketball	19.8	13.8
Baseball or softball	11.6	17.6
Hiking or nature walks	17.5	24.6
Picnicking	4.5	3.4
Tennis	46.2	150.0
Fishing	27.1	86.3
Golf or miniature golf	25.0	82.1
Football	18.7	34.4
Off-road motorcycling or riding snowmobiles	74.0	261.5
Camping	50.1	311.1
Boating, canoeing or waterskiing	42.6	114.8
Hunting or sport shooting	38.9	118.2
Horseback riding	143.0	185.0
Ice skating	39.5	212.5
Street hockey	35.8	---
Snow skiing	190.8	---

Activities for which deprivation among nonwhites appears to be especially severe are: tennis, fishing, golf or miniature golf, off-road motorcycling or riding snowmobiles, camping, boating, canoeing or waterskiing, hunting or sport shooting, and ice skating. (No percentages are available for street hockey and snow skiing by nonwhites since no nonwhite participants in these activities were encountered in the survey.)

Chart 5

RECREATION ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, PENNSYLVANIA BY SEX, 1974



Females

Across all 19 surveyed activities, the total annual participation by females is 107.45 activity days per capita, compared to 158.59 activity days per capita by males.

Table 12

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY SEX, PENNSYLVANIA, 1974

	Population 5 and over	Male	Female
All activities	131.29	158.59	107.45
Bicycling	30.49	35.94	25.75
Swimming	20.72	20.02	21.35
Sightseeing or driving for pleasure	16.91	16.25	17.45
Basketball	8.74	14.91	3.36
Baseball or softball	7.84	12.00	4.20
Hiking or nature walks	7.44	6.96	7.87
Picnicking	6.13	5.50	6.69
Tennis	5.10	5.46	4.79
Fishing	4.68	7.74	2.01
Golf or miniature golf	3.85	5.96	2.01
Football	3.41	6.49	0.70
Off-road motorcycling or riding snowmobiles	3.01	4.91	1.35
Camping	2.86	3.18	2.57
Boating, canoeing or waterskiing	2.58	3.12	2.11
Hunting or sport shooting	2.23	4.44	0.30
Horseback riding	1.96	1.19	2.63
Ice skating	1.86	1.94	1.79
Street hockey	1.12	2.19	0.19
Snow skiing	0.36	0.40	0.32

The level of unsatisfied recreation interest (interested nonparticipants as a percent of current participants) among females is higher than for males in 16 of the 19 activities. The exceptions are swimming, horseback riding, and snow skiing.

Table 13

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY SEX, PENNSYLVANIA, 1974

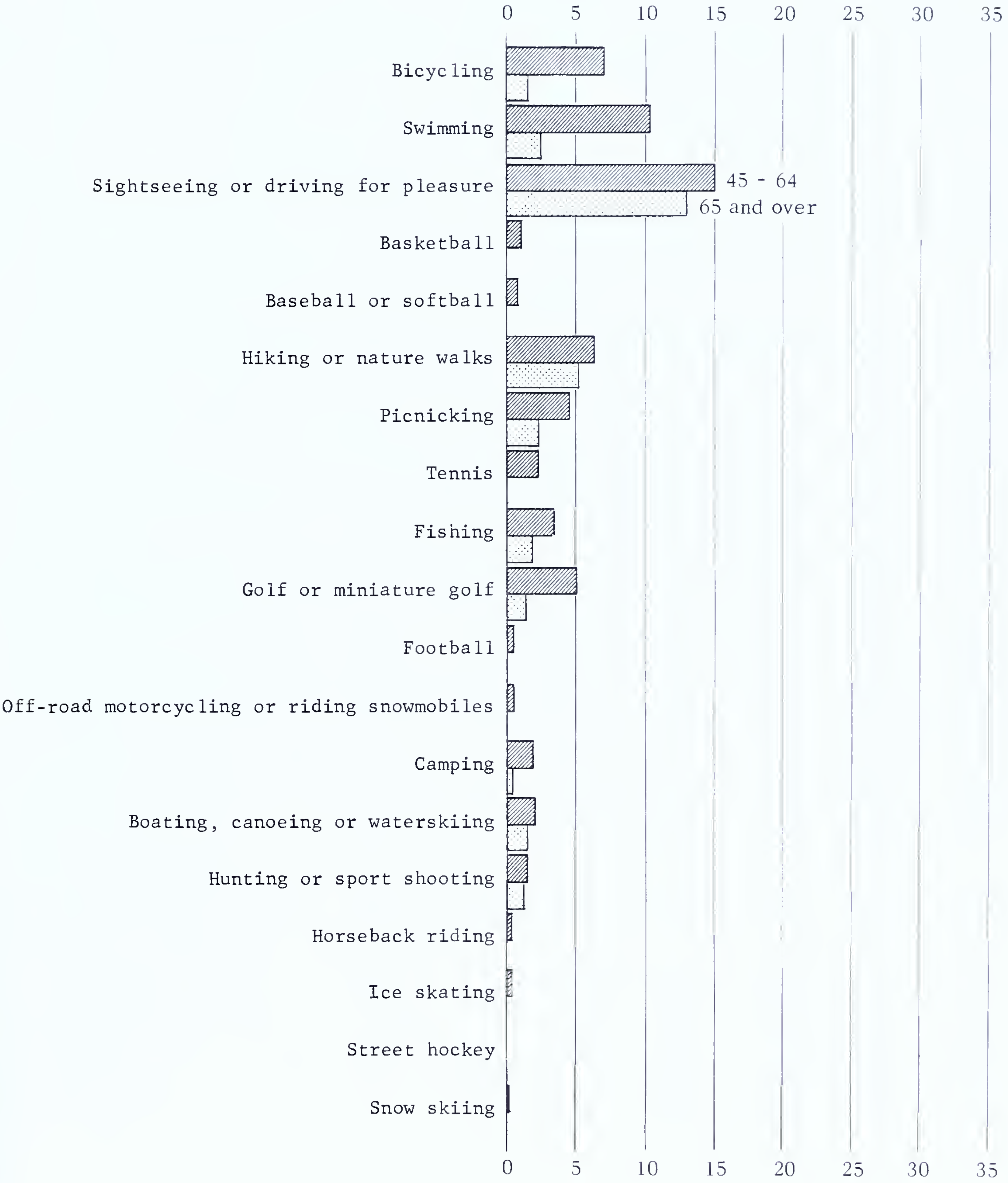
(Interested nonparticipants as a percent of current participants)

	Male	Female
Bicycling	10.7	16.4
Swimming	5.0	4.3
Sightseeing or driving for pleasure	3.0	3.8
Basketball	14.0	30.5
Baseball or softball	8.3	17.2
Hiking or nature walks .	17.5	17.7
Picnicking	4.4	4.5
Tennis	36.6	59.8
Fishing	21.0	42.2
Golf or miniature golf .	20.0	33.1
Football	15.5	34.6
Off-road motorcycling or riding snowmobiles .	71.6	83.2
Camping	52.7	53.4
Boating, canoeing or waterskiing	43.4	44.4
Hunting or sport shooting	28.7	123.7
Horseback riding	155.8	136.1
Ice skating	35.9	45.4
Street hockey	32.6	54.9
Snow skiing	218.0	173.2

It is interesting that the greatest difference between the level of unsatisfied recreation interest for females compared to males occurs for hunting or sport shooting.

Chart 6

RECREATION ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, PENNSYLVANIA
AGE 45 - 64, AND 65 AND OVER, 1974



The elderly

For the 19 surveyed activities, there are strong relationships between recreation participation and age. For 5 activities, activity days peak in the 5 to 9 age category, namely bicycling, swimming, hiking or nature walks, picnicking, and horseback riding. Four activities peak in the 20 to 29 age group, namely sightseeing or driving for pleasure, tennis, boating, canoeing or waterskiing, and hunting or sport shooting. The only activity peaking in the 45 to 64 age bracket is golf or miniature golf. The remaining activities peak in the 10 - 19 age group.

Recreation participation in the 19 activities declines dramatically above age 64. For 9 activities participation virtually disappears. An activity list which adequately represents the recreation interests of the elderly should contain one or more activities which peak in the 65 and older age category.

Table 14

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY AGE, PENNSYLVANIA, 1974

	Population 5 and over	5 - 9	10 - 19	20 - 29	30 - 44	45 - 64	65 plus
All activities	131.29	215.15	258.87	149.20	100.95	63.04	31.17
Bicycling	30.49	90.12	77.56	22.48	13.23	7.09	1.63
Swimming	20.72	39.84	35.87	21.97	20.18	10.40	2.36
Sightseeing or driving for pleasure	16.91	17.38	17.09	25.13	15.89	14.08	12.97
Basketball	8.74	7.35	27.27	11.20	3.89	1.12	0.00
Baseball or softball	7.84	15.13	23.20	6.50	4.25	0.85	0.04
Hiking or nature walks	7.44	10.36	7.84	8.41	7.65	6.43	5.17
Picnicking	6.13	9.10	6.11	8.05	7.41	4.63	2.28
Tennis	5.10	1.46	8.90	10.73	4.45	2.27	0.07
Fishing	4.68	3.53	7.15	5.82	4.92	3.44	1.88
Golf or miniature golf	3.85	1.00	3.83	4.22	4.40	5.14	1.36
Football	3.41	3.55	11.62	3.75	0.84	0.39	0.00
Off-road motorcycling or riding snowmobiles	3.01	1.75	8.13	4.63	1.96	0.58	0.08
Camping	2.86	2.95	4.96	3.12	3.17	1.84	0.38
Boating, canoeing or waterskiing	2.58	2.96	2.83	3.18	2.82	2.14	1.57
Hunting or sport shooting	2.23	0.12	3.09	3.42	2.58	1.60	1.29
Horseback riding	1.96	5.45	3.38	2.52	1.82	0.34	0.06
Ice skating	1.86	2.21	4.71	2.67	1.02	0.54	0.03
Street hockey	1.12	0.73	4.67	0.86	0.07	0.01	0.00
Snow skiing	0.36	0.16	0.68	0.54	0.43	0.16	0.00

Of the 19 activities surveyed for persons aged 65 or over, there is substantial unsatisfied interest in swimming and bicycling.

Table 15

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY AGE, PENNSYLVANIA, 1974

(Interested nonparticipants as a percent of current participants)

	5 - 9	10-19	20-29	30-44	45-64	65 plus
Bicycling	3.4	2.9	21.3	22.7	27.4	64.3
Swimming	0.5	2.3	4.6	4.5	9.0	21.7
Sightseeing or driving for pleasure	2.5	5.0	3.4	3.0	2.6	5.2
Basketball	48.4	10.5	20.2	27.0	44.0	0.0
Baseball or softball	16.5	5.6	13.8	19.2	16.6	10.0
Hiking or nature walks ..	14.0	20.8	17.0	17.5	17.3	17.1
Picnicking	4.1	6.4	3.2	3.3	4.9	5.0
Tennis	84.5	34.4	39.0	73.8	58.1	27.3
Fishing	41.2	19.5	27.4	33.7	33.6	30.3
Golf or miniature golf ...	44.3	19.5	22.1	25.7	33.8	23.9
Football	39.7	11.2	19.2	37.9	39.0	0.0
Off-road motorcycling or riding snowmobiles ..	80.0	88.5	60.3	72.0	91.4	133.3*
Camping	54.1	47.8	64.7	49.7	55.8	47.1
Boating, canoeing or waterskiing	56.1	44.8	33.8	50.7	43.1	41.4
Hunting or sport shooting .	300.0	57.2	28.0	30.4	30.0	23.9
Horseback riding	132.4	130.8	138.5	210.7	152.2	100.0*
Ice skating	76.9	19.9	47.0	63.0	45.6	0.0
Street hockey	64.6	21.4	76.9	200.0*	50.0*	0.0
Snow skiing	286.2	148.5	200.9	294.8	110.3	0.0

* Not reliable because denominator of percent is close to zero.

The disabled or handicapped

Approximately 1 in 8 Pennsylvania households have one or more individuals with one or more of 8 specified disability conditions. Among the disabled individuals, approximately a half have heart or lung conditions and approximately a tenth are persons confined to a wheel chair.

In addition to the 19 outdoor-oriented activities in the original activity list, disabled respondents were questioned about 7 activities which are more sedentary or indoor-oriented, namely: bowling, visiting a museum or zoo, attending a movie, play or concert, attending a live sporting event, participating in a group for cards or other games, participating in a group for arts and crafts, and participating in a social or discussion group.

A supplementary survey was conducted to augment the sample of handicapped individuals. Even with the augmented sample, however, the data generally are subject to high sampling error because the percent of disabled individuals who participated is very low for many of the listed activities, and the percent of disabled individuals with a particular condition is low for some of the listed conditions. For example, only 3.7% of handicapped individuals surveyed were mentally retarded and of these only 4.5% (1 respondent) played tennis during the past year. For such activity/condition combinations, a difference of 1 or 2 respondents more or less would make a very great difference in the participation and unsatisfied recreation interest percentages, so the percentages for such cases should be taken as being at best suggestive qualitative indicators rather than quantitative measures. The reader having been cautioned, the data on at-least-once-a-year participation and unsatisfied recreation interest are presented and compared with the corresponding data for the population 5 and over and the population 65 and over.

The at-least-once-a-year recreation participation of disabled or handicapped individuals exceeds that of individuals 65 and over in 17 of the 19 activities in the original activity list. The exceptions are sightseeing or driving for pleasure and hunting or sport shooting.

The unsatisfied recreation interest of disabled or handicapped persons exceeds that of the elderly in basketball, baseball or softball, tennis, fishing, golf or miniature golf, football, hunting or sport shooting, and ice skating.

Table 16

PRESENCE OF DISABLED OR HANDICAPPED PERSONS IN PENNSYLVANIA HOUSEHOLDS, 1974

Condition	Households	Disabled individuals	
		Percent	number in sample
Total	100.0%		
No disability present	87.9		
Disability present	12.1	100.0	594
Confined to a wheel chair	1.0	9.1	54
Required to use braces, crutches or a walker	1.9	16.3	97
Blind or nearly blind	1.7	15.3	91
Deaf or nearly deaf	1.7	15.0	89
Coordination disability such as palsy	1.3	10.8	64
Heart or lung disability which limits activity	7.1	49.8	296
Emotionally disturbed *	0.4	4.0	24
Mentally retarded *	0.5	3.7	22

* Responses for emotionally disturbed and mentally retarded individuals were provided by a household head knowledgeable about their recreation activities.

ANY TIME DURING YEAR PARTICIPATION, POPULATION 5 AND OVER, 65 AND OVER, AND INDIVIDUALS WITH SELECTED DISABILITIES, PENNSYLVANIA, 1974
(Percent of persons)

Activity	Total population		Any listed disability	Wheel chair	Braces crutch walker	Blind or nearly blind	Deaf or nearly deaf	Coor-dination disab.	Heart lung disab.	Emo-tionally disturb.	Mentally re-tarded
	5 and over	65 and over									
Average	30.5	7.7	11.3	6.7	9.7	8.7	10.8	12.1	10.9	14.4	21.5
Bicycling	47.9	3.1	9.8	0.0	5.2	6.6	6.7	12.5	10.1	25.0	22.7
Swimming	66.7	11.7	20.5	7.4	16.5	14.3	21.3	26.6	17.6	29.2	63.6
Sightseeing or driving for pleasure	72.5	51.1	41.6	33.3	50.5	36.3	40.4	37.5	43.6	29.2	50.0
Basketball	22.2	0.0	4.2	3.7	1.0	4.4	4.5	6.2	2.0	4.2	18.2
Baseball or softball	32.4	1.1	5.1	1.9	2.1	4.4	2.2	7.8	3.7	8.3	27.3
Hiking or nature walks	40.9	11.6	13.6	1.9	8.2	12.1	14.6	6.2	14.2	25.0	27.3
Picnicking	70.6	35.3	38.0	31.5	36.1	27.5	39.3	35.9	35.5	37.5	77.3
Tennis	24.0	1.2	2.2	0.0	2.1	2.2	0.0	1.6	2.7	4.2	4.5
Fishing	31.9	8.4	10.8	3.7	4.1	9.9	11.2	12.5	11.8	12.5	27.3
Golf or miniature golf	29.0	5.1	6.2	3.7	3.1	4.4	4.5	9.4	6.1	4.2	9.1
Football	16.5	0.0	1.9	1.9	0.0	2.2	3.4	3.1	1.0	0.0	4.5
Off-road motorcycling or riding snowmobiles	12.0	0.3	2.7	0.0	2.1	1.1	4.5	4.7	2.4	4.2	0.0
Camping	26.3	3.8	8.1	0.0	6.2	5.5	10.1	9.4	6.8	16.7	22.7
Boating, canoeing or waterskiing	30.7	7.8	9.3	1.9	8.2	8.8	7.9	6.2	10.8	12.5	18.2
Hunting or sport shooting	14.0	5.1	4.7	0.0	2.1	3.3	6.7	4.7	5.7	0.0	4.5
Horseback riding	11.1	0.7	2.5	0.0	3.1	3.3	1.1	1.6	1.7	8.3	0.0
Ice skating	21.2	0.2	2.9	0.0	3.1	3.3	2.2	0.0	2.4	8.3	4.5
Street hockey	4.6	0.0	0.8	0.0	2.1	0.0	0.0	0.0	0.3	4.2	9.1
Snow skiing	4.9	0.0	0.5	0.0	1.0	2.2	0.0	0.0	0.0	0.0	0.0
Bowling	na	na	7.9	3.7	6.2	11.0	11.2	10.9	4.1	8.3	31.8
Visiting museums or zoos	na	na	15.7	14.8	13.4	11.0	10.1	15.6	16.9	25.0	22.7
Movies, plays, concerts	na	na	28.8	20.4	23.7	13.2	25.8	34.4	29.1	41.7	54.5
Attend live sporting events	na	na	15.5	11.1	12.4	18.7	15.7	15.6	15.2	8.3	18.2
Groups for cards, games	na	na	19.7	22.2	19.6	9.9	19.1	25.0	17.9	25.0	18.2
Groups for arts and crafts	na	na	6.4	3.7	9.3	2.2	2.2	7.8	5.7	20.8	18.2
Social or discussion groups	na	na	13.6	7.4	10.3	9.9	15.7	10.9	15.5	12.5	4.5

na: Not asked in main survey

Table [illegible].--UNSATISFIED RECREATION INTEREST, POPULATION 5 AND OVER, 65 AND OVER, AND INDIVIDUALS WITH SELECTED DISABILITIES, PENNSYLVANIA, 1974
(Interested nonparticipants as a percent of current participants)

Activity	Total population 5 and over	Total population 65 and over	Any listed disability	Wheel chair	Braces crutch walker	Blind or nearly blind	Deaf or nearly deaf	Coor-dination disab.	Heart lung disab.	Emo-tionally disturb.	Mentally re-tarded
Average	24.2	15.3	15.7	24.5	11.9	16.9	20.0	15.3	17.7	17.8	8.1
Bicycling	13.7	64.3	12.1	0.0	40.0	0.0	16.7	0.0	16.7	16.7	0.0
Swimming	4.6	21.7	16.4	25.0	12.5	46.2	26.3	5.9	19.2	14.3	14.3
Sightseeing or driving for pleasure	3.5	5.2	3.6	0.0	2.0	6.1	2.8	12.5	3.9	14.3	0.0
Basketball	19.5	0.0	16.0	0.0	100.0	0.0	25.0	25.0	16.7	100.0	25.0
Baseball or softball	11.8	10.0	20.0	0.0	50.0	25.0	50.0	20.0	18.2	50.0	0.0
Hiking or nature walks	17.7	17.1	8.6	0.0	0.0	0.0	7.7	25.0	11.9	0.0	0.0
Picnicking	4.5	5.0	4.9	5.9	2.9	12.0	5.7	8.7	6.7	0.0	0.0
Tennis	47.8	27.3	92.3	---	0.0	0.0	---	100.0	87.5	200.0	100.0
Fishing	28.6	30.3	31.3	150.0	75.0	11.1	30.0	37.5	22.9	66.7	16.7
Golf or miniature golf	25.9	23.9	32.4	100.0	66.7	25.0	50.0	16.7	38.9	100.0	0.0
Football	19.4	0.0	36.4	0.0	0.0	50.0	0.0	0.0	33.3	0.0	100.0
Off-road motorcycling or riding snowmobiles	76.8	133.3	56.3	0.0	100.0	100.0	0.0	33.3	71.4	0.0	0.0
Camping	53.3	47.1	12.5	0.0	16.7	0.0	0.0	16.7	20.0	0.0	0.0
Boating, canoeing or waterskiing	43.9	41.4	21.8	100.0	25.0	12.5	28.6	50.0	9.4	33.3	0.0
Hunting or sport shooting	39.6	23.9	35.7	---	100.0	33.3	16.7	0.0	29.4	---	0.0
Horseback riding	145.1	100.0	86.7	0.0	33.3	66.7	300.0	100.0	140.0	50.0	0.0
Ice skating	40.9	0.0	23.5	0.0	33.3	33.3	0.0	0.0	28.6	0.0	0.0
Street hockey	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Snow skiing	194.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boating	na	na	36.2	0.0	0.0	20.0	40.0	28.6	75.0	50.0	28.6
Visiting museums or zoos ...	na	na	20.4	12.5	15.4	20.0	55.6	20.0	24.0	0.0	0.0
Movies, plays, concerts ...	na	na	9.9	18.2	4.3	33.3	17.4	13.6	10.5	0.0	0.0
Attend live sporting events ..	na	na	20.7	50.0	16.7	17.6	28.6	30.0	22.2	0.0	0.0
Groups for cards, games ...	na	na	8.5	0.0	0.0	11.1	5.9	12.5	17.0	0.0	0.0
Groups for arts and crafts ..	na	na	39.5	200.0	11.1	50.0	100.0	40.0	47.1	0.0	0.0
Social or discussion groups .	na	na	8.6	25.0	0.0	11.1	21.4	0.0	8.7	0.0	0.0

na: Not asked in main survey

Densely populated urban areas

Across all 19 activities the total activity days per capita in the areas with population densities of 6,000 or more persons per square mile is 125.43 compared to 136.26 for the medium density places with 1,000 - 5,999 persons per square mile and 130.88 for the low density places.

Table 19

ACTIVITY DAYS PER CAPITA, 19 ACTIVITIES, BY POPULATION DENSITY, PENNSYLVANIA, 1974

	Population 5 and over	Population density		
		Low: under 1,000 per sq. mile	Medium: 1,000 - 5,999 per sq. mile	High: 6,000 or more per sq. mile
All activities	131.29	130.88	136.26	125.43
Bicycling	30.49	30.47	32.72	27.74
Swimming	20.72	19.36	21.08	20.98
Sightseeing or pleasure driving	16.91	16.64	17.27	16.61
Basketball	8.74	6.39	8.79	9.87
Baseball or softball	7.84	7.23	7.90	8.08
Hiking or nature walks	7.44	11.61	7.43	5.36
Picnicking	6.13	5.60	6.64	5.77
Tennis	5.10	4.41	4.67	6.00
Fishing	4.68	5.28	4.97	4.03
Golf or miniature golf	3.85	3.05	3.90	4.21
Football	3.41	2.14	3.56	3.86
Off-road motorcycling or riding snowmobiles	3.01	4.29	3.76	1.43
Camping	2.86	2.85	3.27	2.35
Boating, canoeing or waterskiing	2.58	2.57	2.55	2.62
Hunting or sport shooting ...	2.23	3.48	2.55	1.20
Horseback riding	1.96	2.56	2.10	1.48
Ice skating	1.86	2.01	2.10	1.49
Street hockey	1.12	0.50	0.60	2.08
Snow skiing	0.36	0.45	0.40	0.26

The high density places have participation at least 10% above the statewide average in basketball, tennis, football, and street hockey, and at least 10% below, in hiking or nature walks, fishing, off-road motorcycling or riding snowmobiles, camping, hunting or sport shooting, horseback riding, ice skating, and snow skiing.

Unsatisfied recreation interest is greatest in the urban areas for 13 of the 19 activities, namely: sightseeing or driving for pleasure, hiking or nature walks, picnicking, tennis, fishing, off-road motorcycling or riding snowmobiles, camping, boating, canoeing, or waterskiing, hunting or sport shooting, horseback riding, ice skating, street hockey, and snow skiing.

Table 20

UNSATISFIED RECREATION INTEREST, 19 ACTIVITIES, BY POPULATION DENSITY, PENNSYLVANIA, 1974

(Interested nonparticipants as a percent of current participants)

	Low: under 1,000 per sq. mile	Medium: 1,000 - 5,999 per sq. mile	High: 6,000 or more per sq. mile
Bicycling	11.8	14.6	13.7
Swimming	6.1	4.0	4.8
Sightseeing or driving for pleasure	2.4	3.6	3.8
Basketball	24.3	18.3	18.7
Baseball or softball	10.8	12.3	11.7
Hiking or nature walks	11.2	19.4	19.8
Picnicking	4.2	3.5	5.8
Tennis	45.7	46.7	50.3
Fishing	27.1	23.4	37.2
Golf or miniature golf	32.6	22.9	26.5
Football	25.4	14.1	23.2
Off-road motorcycling or riding snowmobiles	52.4	58.5	164.3
Camping	39.5	41.5	83.8
Boating, canoeing or waterskiing	37.5	40.8	51.6
Hunting or sport shooting	29.4	27.7	80.4
Horseback riding	100.0	130.3	202.0
Ice skating	35.2	40.2	45.5
Street hockey	13.6	36.9	44.1
Snow skiing	150.5	197.8	227.8

ACTION RECOMMENDATIONS

The current recreation survey was not designed to test or compare the effectiveness of specific action alternatives in recreation planning. Indeed, no action proposals were formulated either prior to questionnaire design or subsequent to the interviewing and prior to the computer tabulation runs. However, in the massive amounts of data obtained certain patterns and interrelationships have emerged, and it is clear that action proposals to be considered must satisfy the minimum requirement of being consistent with these patterns and interrelationships. The evaluation of specific action proposals would require further research of substantially different design.

In what follows, several action proposals will be recommended. The proposals are not necessary consequences of the data. Rather, they are a set of plausible working hypotheses which are entirely consistent with the data. Certain of the recommendations result more from an intuitive understanding of the recreation picture than from the hard data itself. However, it is felt that the recommendations arise from an intuition which is extremely well informed as a result of sifting, studying, and analyzing the massive amounts of data collected. The overwhelming sense gained from this analysis was that a simple continuation of present approaches in recreation would not deal with the apparently highly intractable problems encountered. What follows is a view of recreation planning which represents an attempt to deal with the problems. It is not our purpose to outline a total recreation program or recreation plan but rather to suggest three premises for more effective recreation planning and specific types of actions which are consistent with the three premises.

Premise 1: Groups and Information--Recreation Software. Traditionally, consideration of recreation resources has included only tangible physical facilities and resources: numbers of tennis courts, miles of hiking trails, acres of game land, etc. However, there are also nonphysical factors which have major impact on recreation participation. Among these are the organizational know-how of individuals and groups, the patterns of interaction and organization within the community, public knowledge of available facilities and available means of access to facilities, well-designed and well-maintained data bases, etc.--in short, groups and information.

Groups and information are a major recreation resource. They should be recognized as such and should be as consciously and deliberately developed as are any physical facilities and resources. As with any physical recreation resource, means should be developed to measure the groups and information resource and to monitor its growth.

A fruitful analogy exists between recreation resources and the resources of computer technology. In computer technology, resources consist of hardware--physical computing machinery and devices--and also software--programs, systems of organization, and information. Hardware alone, while valuable, is ineffective unless coupled with software which is the result of thoughtful and imaginative development. Neither hardware nor software is of much use by itself. In the past, recreation planning has largely ignored the necessity for recreation "software".

Premise 2: Underutilized Mass Transit. Underutilized mass transit facilities constitute a latent recreation resource which can be pressed into service with virtually no additional investment and which is most available when recreation demand is greatest. Moreover, use of mass transit facilities when they would otherwise stand idle would benefit the mass transit systems themselves.

The survey data show that individuals in noncar-owning households are manifestly deprived of access to recreation. The deprivation among such individuals (many of whom are low-income, elderly, nonwhite, and/or inner-city residents) is so severe that making mass transit available to them for recreation outings could be expected to have a substantial impact on overall recreation participation.

An effective program of mass transit for recreation would rely heavily on the use of groups as facilitators and organizers of recreation--according to Premise 1. Groups would enable economical, efficient use of vehicles and would provide supervision and control of individuals en-route and at the recreation site. Conversely, an effective program of mass transit for recreation would stimulate and support expansion of the role of groups in organizing and facilitating recreation activity.

An effective program of mass transit for recreation would also rely heavily on increased dissemination of information about available facilities and available means of access to facilities--see Premise 1. A successful campaign to increase public awareness of available recreation opportunities would increase the demand for group outings, thereby providing support for the usage of mass transit for recreation.

Premise 3: More Equal Access. The State should adopt an explicitly enunciated policy of working toward equal access to recreation among all segments of the citizenry. The State has long recognized the need for more equal access, and it should now move to implement what must become an explicit, consciously pursued policy.

First, data on recreation activity must be analyzed expressly for the purpose of detecting inequalities in access to recreation. The current survey has begun to make such analysis possible. Second, proposals for expanded recreation facilities and programs must be examined to determine their differential impact on different segments of the population. Planners should ask whether the proposed expansions will effectively reduce inequalities in access to recreation. The supply accessibility phase of the demand projections system points the way to a working model for such examination of proposals. Consideration of access deficiencies should also enter actively into shaping of the proposals themselves. Finally, the technical capability must be developed for ongoing statistical monitoring and evaluation of access to recreation.

A key to overcoming recreational deprivation on the part of disadvantaged segments of the population lies in stimulating and supporting expansion of the role of groups as facilitators and organizers of recreation. Groups enable outings at reduced cost. Groups provide the financial and organizational capacity to hire buses, reserve sites, advertise coming events, investigate available facilities, and so on. Groups make it possible for seriously disabled individuals to participate. Groups provide for supervision and control of individuals in transit and at the site. A person who might otherwise be reluctant to venture out to some remote site or to try a new activity would be encouraged by the security of being part of a group. Groups make it possible for people who live alone and have no means of transportation to participate. And many activities are simply more enjoyable when participated in with a group.

State recreation data base

The current survey, the associated facilities inventory, and the recreation demand projections which utilize both the survey and the facilities inventory will come to constitute a planning instrument of considerable power. They are a major data resource superior in current and potential effectiveness to the data resources possessed by other states or those which underlay prior Pennsylvania recreation plans. However, substantial expansion and refinement are needed. Even though current data resources are of far greater quality and scope on the demand side than on the supply side, it is on the demand side that the greatest need for expansion exists. The need for refinement and redesign is greatest on the supply side.

Demand side expansion should encompass several areas: increased scope and detail of activity lists, added attention to the needs of special population segments, and expanded consideration of activity-specific detail, particularly of the role of groups in recreation.

Increased scope and detail of activity lists is desirable for several reasons. First, a list of recreation activities is implicitly a set of recreation priorities. Activities excluded from a list tend to be excluded from consideration in recreation planning. Second, an activity list which is too short or is poorly chosen will necessarily exclude certain segments of the population from planning consideration. For example, the list of 19 activities chosen for the current survey, for the most part, does not include sedentary or indoor activities, and consequently the survey results do not provide adequate coverage of the recreation needs of the elderly and the handicapped. Third, activity lists should be augmented to include more activities which are participated in locally and are not automobile-dependent. In the past, recreation studies have tended to focus on outings and outing-type activities, with the result that outdoor games and sports of the kind that are participated in locally have been grossly underrepresented. The current survey has gone a long way toward correcting the outing-oriented bias, but there is still room for improvement. Activities such as park-sitting, walking for pleasure, and using playground equipment, for example, are also worthy of quantification.

Added attention to the needs of special population segments is required to enable planning which can effectively reduce the recreational deprivation of disadvantaged segments of the population. The current survey has served to detect and identify particular disadvantaged segments. Future studies should include components designed specifically for the purpose of investigating the nature and extent of recreational deprivation.

Expanded consideration of activity-specific detail is required particularly in connection with measuring and detailing the role of groups in facilitating and stimulating recreation participation. Efforts to obtain current measures of the effectiveness of groups and to monitor progress and growth in this area must be an integral part of any program which seeks to stimulate and support expansion of the role of groups in recreation.

In the past, activity lists and the detail obtained for each activity have been constrained by the requirement that interviews be kept at a reasonable length. However, it would be possible to use an expanded activity list and still keep a manageable interview length. One can rotate among sets of activities or sample randomly among individual activities so that each respondent would be questioned only on a subset of the activity list. A composite picture for the whole population can then be assembled by computer.

On the supply side, the facilities inventory needs to be substantially revamped and redesigned. Design of the questionnaire instrument to be used should be governed by considerations of clarity and ease of execution rather than ease of keypunching. Such considerations of questionnaire design are particularly crucial when the questionnaire forms are to be executed by persons other than professional interviewers.

More systematic collection of data relating to recreation operations is needed; for example, surveys of:

voluntary agencies, organizations, and groups
park managers
concessionaires.

Such surveys should be specific to each universe.

Both on-site user surveys and local telephone surveys should be employed to a greater degree to aid in project planning.

As a general comment on recreation data and data systems there should be more emphasis on scientific surveying and sampling. Better designed questionnaires and information schedules and better research designs and sample designs are needed. Where resources are limited, samples can be limited in size. In general, censuses should be avoided, and resources put into better design and analysis. Catch-as-catch-can data collection may produce highly biased pictures.

The initial emphasis should be on obtaining a greater breadth and depth of information rather than on installing on-going, permanent data systems. Initially, updating should be done with special purpose surveys as needed. It may also be noted that the level of funding required will be substantially larger than that for the traditional state recreation plan.

Demand side actions

Following is a list of proposed demand side actions to stimulate recreation participation. The list is not intended to be either exhaustive or detailed, but rather to amplify and clarify by example the three premises stated above.

1. A program of recreation stamps for the elderly. The program could permit the stamps to be freely spent or it could require that they be redeemed only by approved or registered recreation facilitators, such as voluntary agencies, groups, or organizations. The latter approach would stimulate the development of group-facilitated recreation activity, which is a key to increased participation by recreationally deprived segments of the population.

Among the elderly, recreation participation rates are greatly reduced, but the levels of unsatisfied recreation interest are lowered as well. It is felt that elderly persons have accommodated their recreation aspirations to the difficulties of their situation and the lack of recreation opportunities available to them.

It is apparent from the survey data that several subgroups of the population are currently being deprived of access to recreation participation. For certain subgroups, such as individuals in noncar-owning households, the level of deprivation is considerably more severe than it is for the elderly. There are two reasons, however, for recommending that a stamp program be directed specifically to the elderly. First, since the elderly comprise a readily identifiable subgroup for which various kinds of public programs are already in existence, a stamp program for the elderly would be relatively more easy to organize and manage. Second, a program of recreation stamps for the elderly may be viewed as a natural extension of the current program which provides free use of mass transit facilities by the elderly during off-peak hours.

The stamp program is seen as catalyst rather than fuel for expansion and equalization of recreation participation. Not only the elderly would benefit. Groups would be stimulated to develop programs and know-how which would then benefit other disadvantaged segments of the population, particularly the handicapped. The isolation of the elderly would be reduced and they would become valued and sought after. Since car ownership is low among the elderly, transportation arrangements would have to be made for them. Such arrangements would tend to stimulate the general use of mass transit in recreation.

It should be pointed out that while the idea of a program of recreation stamps for the elderly arises out of relationships observed in the survey data, the survey was not designed to directly evaluate the potential effectiveness of such a program.

2. Advertising, publicity, and information programs designed to:

   a. Publicize and promote the use of state parks and game lands.
   b. Help agencies, organizations, and groups design, organize, and manage

recreational events and programs, both activity and program oriented; e.g., how to organize a bus sightseeing trip and picnic, or how to form a theater group designed to perform for the elderly.

c. Stimulate and support inter-agency communication among:

   transit companies
   county and municipal recreation departments and park commissions
   city, county, and regional planning commissions
   voluntary agencies, community organizations and groups
   local newspapers
   school administrators and school boards.

d. Support an expanded role for concessionaires and support the demand for their services, e.g., rental of bicycles and adult tricycles for the elderly and handicapped, camping gear, fishing equipment, horseback riding. Concessionaires might rent certain types of equipment to registered groups only, or have special rates to groups.

e. Promote increased rental of equipment at the trip origin point through city recreation departments or commercial dealers. Here also, groups might get special privileges and rates.

f. Support bus service to the interior of large recreation facilities.

g. Support revised transportation and recreation policies and improved recreation data bases on the part of the Federal government and nearby state governments.

h. Promote fuller use of school facilities, particularly indoors, by groups or organizations. Here also, a group certification process would increase the security of schools.

3. Special license and fee arrangements, e.g., for-the-day fishing licenses and discounts to groups traveling by bus or van, with reciprocal arrangements with bordering states.

4. Maintain a photographic file coded to road location which can be used to help in scenic tour and outing design and promotion, and equipment sales and rental. A

computerized microfilm information system would be useful to transit companies, recreation directors, and groups. Trips could be "produced" with photographic exhibits which satisfy certain parameters, e.g., origin location, time and cost limitations, destination facilities required.

Supply side actions

The survey data file and the data file under development in connection with the demand projections provide a basis for evaluating the impact of alternative projects. For example, the effect on participation of one large facility at a single location could be compared with the effect of several smaller facilities at various locations. The principal recommendation here is to make use of this capability. Therefore relatively few specific supply recommendations are presented.

1. Support programs and projects which are designed to increase the accessibility and capacity for swimming and picnicking. This means a bias toward smaller facilities at more numerous locations.
2. The number of activity days under crowded conditions for tennis is nearly equal to that for swimming, so that an expansion in tennis capacity is indicated also.
3. More signing in support of sightseeing, at locations tied into the photographic file. Sightseeing is particularly important to the elderly.
4. Selective signing and interim shoulder paving in support of at-destination scenic recreational bicycling and tricycling.
5. Legislation to permit higher prices per acre to be paid and smaller sites to be purchased for development in or near metropolitan areas, which are relatively deprived of recreation facilities, according to an approved measure taking account of both recreational supply and accessibility.

DETAILED ANALYSIS

Chapter 1.--GENERAL CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS

The survey population

The median age of individuals 5 or more years old in households surveyed is 34.9 years. 27.5% of individuals were less than 20 years old, 49.4% were less than 35 years old, 78.2% were less than 55 years old, and 89.4% were less than 65 years old. Note that interview subjects were required to be at least 5 years old.

46.7% of individuals 5 or more years old were males and 53.3% were females.

Among all households surveyed, the median total family income is $9,758. Only 7.7% of households refused to divulge their incomes. Among the households which gave an income figure, 11.3% had total family incomes under $4,000, 25.5% had incomes under $7,000, 52.2% had incomes under $10,000, 77.8% had incomes under $15,000, and 94.6% had incomes under $25,000.

In each household, all individuals 5 or more years of age had an equal likelihood of being selected for interview. Thus, a distribution of total family income for individuals rather than households is obtained by weighting each family income by the number of individuals in the household. For all individuals 5 or more years old the median total family income is $10,839. The median family income for individuals 5 or more years old is higher than the median family income for households surveyed because larger households have higher incomes. Among individuals for whom total family income was obtained, 6.6% had total family incomes under $4,000, 17.0% had family incomes under $7,000, 45.2% had family incomes under $10,000, 73.7% had family incomes under $15,000, and 93.5% had family incomes under $25,000.

Among individuals 20 or more years old, the median education is 12.0 years of

schooling. 11.4% had less than 9 years of schooling, and 25.6% had less than 12 years of schooling. 44.5% had exactly 12 years of schooling, 29.3% had at least some college, and 15.9% had 4 or more years of college.

Among all households surveyed, the median household size is 2.8 persons. 15.1% of households had just 1 member, 30.2% had 2 members, 17.9% had 3 members, 17.5% had 4 members, and 19.2% had 5 or more members. Household members were defined to be persons living currently and permanently in the household.

A household size distribution for individuals is obtained by weighting by household size, just as was done for total family income. For individuals 5 or more years old, the median size of the individual's household is 3.8 persons. Only 5.2% of individuals were from households with only 1 member, 20.8% were from households with 2 members, 16.9% were from households with 3 members, 21.6% were from households with 4 members, 16.5% were from households with 5 members, and 19.1% were from households with 6 or more members.

Among all households surveyed, the median age of the head of the household is 48.7 years. 13.9% of households had heads less than 30 years old, 41.0% had heads less than 45 years old, 61.8% had heads less than 55 years old, and 80.1% had heads less than 65 years old. A distribution of ages of heads of households was obtained for individuals as well. For individuals 5 or more years old, the median age of the head of the individual's household is 45.7 years.

Among all households surveyed, the median number of years of schooling for the head of the household is 12.0 years. 14.6% of household heads had less than 9 years of schooling and 29.4% had less than 12 years. 40.2% of household heads had exactly 12 years of schooling and 30.6% had at least some college.

Among individuals 5 or more years old, 45.4% were employed. Of these, 83.3% (37.8% of the total) were employed full-time and 16.7% (7.6% of the total) were employed part-time. Among individuals 5 or more years old, 54.6% were not employed. Of these, 43.4% (23.7% of the total) were students or preschool children, 31.9% (17.4% of the total) were housewives, 19.4% (10.6% of the total) were retired, and 2.9% (1.6% of the total)

were out of work.

Among all households surveyed, 74.1% had household heads who were employed. Of these, 95.3% (70.6% of the total) were employed full-time and 4.7% (3.5% of the total) were employed part-time. 25.9% of household heads were not employed. Of these, 73.7% (19.1% of the total) were retired, 7.3% (1.9% of the total) were out of work, and 6.9% (1.8% of the total) were housewives. Among all individuals 5 or more years old, 81.8% were from households where the household head was employed. Of these, 97.1% (79.4% of the total) were employed full-time and 2.9% (2.4% of the total) were employed part-time. Among individuals 5 or more years old, 18.2% were from households where the household head was not employed. Of these, 65.9% (12.0% of the total) were retired, 9.9% (1.8% of the total) were housewives, and 9.3% (1.7% of the total) were out of work.

Among all households surveyed, 95.0% had household heads who were white and 5.0% had household heads who were not white. Among all individuals 5 or more years old, 95.3% were from households where the household head was white and 4.7% were from households where the household head was not white.

Among all households surveyed, 89.2% had a car, camper, or truck that was used like a car, and 10.8% did not. Among all individuals 5 or more years old, 93.7% were from households with a car or a camper or truck that was used like a car and 6.3% were not.

The survey was conducted by telephone. Hence, only telephone subscribers were interviewed. As a result, the survey population is biased away from individuals with very low incomes, individuals with low education, individuals in noncar-owning households, nonwhite individuals, and individuals who are unemployed but in the labor force. For a comparison of the characteristics of the population in the 1974 Pennsylvania Recreation Survey with the characteristics of the population of Pennsylvania as determined by the 1970 Census see Table A1 in the appendix.

Characteristics by age, sex, and total family income

There is considerable variation in total family income depending on the age of the

interview subject, reflecting what might be called "life cycle" changes for individuals and families. The distribution of total family income for households surveyed peaks in the 5 to 9 year interview-subject age category (where the median income is $12,169), falls off in the 10 to 19 year age category, ($11,863), and falls still further in the 20 to 29 year age category ($10,710). Interview subjects in the 20 to 29 year age category were likely to be themselves heads of households and to have relatively small incomes because of their youth. Total family income reaches its overall peak in the 30 to 44 year interview-subject age category ($12,288), then declines in the 45 to 64 year category ($9,637) and declines quite dramatically in the 65 and over category. The median total family income for households with the interview subject 65 or more years old is $4,818 compared to $9,758 for all households surveyed.

Among households where the interview subject was a male the median total family income is $10,856. Among households where the interview subject was a female the median total family income is only $9,105. For individuals 5 or more years old, the median total family income is approximately equal for males and females, about $11,500.

Among males 5 or more years old the median age is 31.9 years, while among females 5 or more years old the median age is 37.2 years. The difference is accounted for by the fact that a much smaller percentage of female interview subjects were in the 10 to 19 year age bracket (15.5%) compared to male interview subjects (24.1%). The smaller percentage of female interview subjects in the 10 to 19 year age category may reflect reluctance on the part of parents to allow females in this age group to be interviewed on their recreation. The reduced presence of female interview subjects in the 10 to 19 year age group tends to lower the recreation participation rates for females, but does not account fully for the fact that recreation participation is lower for females than for males. Moreover, as was shown in the Principal Findings and Recommendations section of this report, females have higher levels of unsatisfied recreation interest than do males.

Education of individuals 20 or more years old decreases with increasing age. The median number of years of schooling is 12.5 in the 20 to 29 year age category, 12.1 in the 30 to 44 year group, 11.9 in the 45 to 64 year group, and 10.7 in the 65 and over

group. There was little difference in education depending on sex. As might be expected, there is considerable variation in education depending on total family income. Among individuals 20 or more years old, the median number of years of schooling is 9.8 years for individuals with total family incomes under $4,000 compared to 13.3 years for the $15,000 and over category.

For individuals 5 or more years old, the size of the individual's household varies considerably depending on the individual's age. For individuals in the 5 to 9 year age category the median household size is 4.9 persons, in the 10 to 19 year group it is 5.1 persons, in the 20 to 29 year group it is 3.4 persons, in the 30 to 44 year group it is 4.4 persons, in the 45 to 64 year group it is 2.8 persons, and in the 65 and over group it is 1.9 persons. Larger households have larger incomes. Among individuals in households with total family incomes under $4,000 the median household size is only 2.0 persons, while among individuals in households with family incomes of $15,000 or more the median household size is 4.2 persons.

The age of the head of the household is inversely correlated with total family income. Among individuals in households with total family incomes under $4,000 the median age of the household head is 66.1 years, while among individuals in households with family incomes of $15,000 or more the median age of the household head is only 43.0 years.

The education of the household head is positively correlated with total family income. Among individuals in households with total family incomes under $4,000 the median number of years of schooling of the household head is only 9.3 years, while among individuals in households with total family incomes of $15,000 or more the median is 14.4 years.

Characteristics by employment status and education of subject, household size, and car ownership

Employed individuals are older than those who are not employed. Among individuals 5 or more years old the median age of employed individuals is 37.9 years, compared to 28.3 years for those unemployed and 28.7 years for those not in the labor force. Naturally, employed individuals have higher incomes. Among individuals 5 or more years old

who are employed the median total family income is $12,009, compared to only $7,964 for those unemployed and $9,898 for those not in the labor force. There is no substantial difference between employed and unemployed individuals with respect to education. Among individuals 5 or more years old who are employed the median number of years of schooling is 12.2 years, for those unemployed it is again 12.2 years, and for those not in the labor force it is 11.8 years.

There is considerable variation in the education of individuals 20 or more years old depending on their age. Among individuals 20 or more years old with less than 9 years of schooling the median age is 64.2 years, compared to 35.6 years for those with 9 to 11 years of schooling, 40.2 years for those with 12 years of schooling, 33.7 years for those with some college, and 42.8 years for college graduates. As would be expected, total family income increases with education of individuals 20 or more years old. Among individuals 20 or more years old with less than 9 years of schooling the median total family income is $9,854, compared to $9,527 for those with 9 to 11 years of schooling, $10,496 for those with 12 years of schooling, $12,842 for those with some college, and $16,443 for college graduates. The size of an individual's household is inversely related to his education. Among individuals 20 or more years old with less than 9 years of schooling the median household size is 4.4 persons, compared to a median household size of 3.2 persons for college graduates 20 or more years old.

As would be expected, age of individuals is inversely related to the size of their household. Among individuals from households with 1 or 2 persons the median age is 58.1 years, compared to 31.9 years for those from 3 or 4 person households and 20.2 years for those from households with 5 or more persons. As noted previously, larger households have higher incomes. The age of the household head is inversely related to the household size. Among individuals from 1 or 2 person households the median age is 59.6 years, compared to 44.6 years for those from 3 or 4 person households and 42.0 years for those from households with 5 or more persons.

Among individuals from a household with a car the median age is 33.6 years, compared to 61.2 years for individuals from a household without a car. Naturally, car-owning

households have much higher incomes. Among car-owning households the median total family income is $10,523 compared to only $3,766 for noncar-owning households. Car-owning households are larger. Among car-owning households the median household size is 3.0 persons compared to only 1.0 persons for noncar-owning households. The heads of car-owning households are younger and better educated than the heads of noncar-owning households.

Characteristics by age, education, employment status, and race of head of household

There is considerable variation in total family income depending on the age of the household head. Among households with the household head less than 30 years old the median total family income is $10,539, compared to $12,459 for households with the head 30 to 44 years old, $10,113 for households with the head 45 to 64 years old, and only $5,030 for households with the head 65 or more years old. There is also considerable variation in household size depending on the age of the household head. Among households with the head less than 30 years old the median household size is 2.7 persons, compared to 4.2 persons for households with the head 30 to 44 years old, 2.7 persons for households with the head 45 to 64 years old, and 1.7 persons for households with the head 65 or more years old. Education of the household head is inversely related to his age.

As might be expected, there is a strong relationship between total family income and education of the household head. Among households with the household head having less than 9 years of schooling the median total family income is $5,697, compared to $8,367 for household heads having 9 to 11 years of schooling, $9,909 for those with 12 years of schooling, and $13,997 for those with at least some college. There is considerable variation in household size depending on the education of the household head. Among households with the head having less than 9 years of schooling the median household size is 2.0 persons, compared to 2.6 persons for households with the household head having 9 to 11 years of schooling, 3.1 persons for those with 12 years of schooling, and 2.9 persons for those with at least some college.

Naturally, there is a strong relationship between total family income and the employment status of the household head. Among households with the household head employed

the median total family income is $11,586, compared to $6,785 for those with the household head unemployed and $5,038 for those with the household head not in the labor force. Among households with the household head employed the median household size is 3.3 persons, compared to 2.5 persons for those with the head unemployed and 1.8 persons for those with the head not in the labor force. Among households with the household head employed the median age of the household head is 43.7 years, compared to 44.0 years for those with the household head unemployed and 68.4 years for those with the household head not in the labor force. Among households with the household head employed the median education of the household head is 12.1 years of schooling compared to 11.7 years for those with the head unemployed and 11.4 years for those with the head not in the labor force.

There is no significant difference in age of individuals depending on race. There is, however, considerable difference in total family income depending on race. Among households with a household head who is white the median total family income is $9,870 compared to $7,527 for nonwhite households. Among white households the median household size is 2.8 persons compared to 2.5 persons for nonwhite households. The median education among white heads of households is 12.0 years of schooling compared to 11.6 years for nonwhite heads of households.

Characteristics by uniform planning region and population density

The median age of individuals 5 or more years old varies considerably depending on uniform planning region, ranging from a low of 29.9 years for region eight to a high of 39.9 years in region five. The variation in age no doubt accounts for some of the observed variation in recreation participation depending on uniform planning region. Median age of individuals 5 or more years old varies only slightly depending on population density. Where the population density is less than 1,000 persons per square mile the median age of individuals 5 or more years old is 35.3 years. Where the population density is 1,000 to 5,999 persons per square mile the median age is again 35.3 years. Where the population density is 6,000 or more persons per square mile the median age is 34.1 years.

There is also considerable variation in total family income depending on uniform planning region. The lowest median total family income is for households in region five,

$7,979, and the highest is for households in region one, $11,173. There is much less variation in total family income depending on population density. Among households in low population density areas the median income is $9,412, compared to $9,861 in medium density areas and $9,837 in high density areas.

The median education of individuals 20 or more years old varies only slightly with uniform planning region and population density.

The median size of households is somewhat below average in regions one, two, four, and five and above average in regions three, six, eight, and nine. The median size of households is slightly lower in the high population density places, 2.6 persons, than in the medium density places, 2.8 persons, and the low density places, 2.9 persons.

Characteristics by recreation activities done in previous year

The 19 surveyed recreation activities listed in order of increasing median age of participants are: street hockey, 13.6 years; football, 16.9 years; basketball, 17.8; baseball or softball, 18.3; horseback riding, 18.3; ice skating, 18.6; bicycling, 20.3; snowskiing, 20.5; off-road motorcycling or riding snowmobiles, 21.1; tennis, 21.5; camping, 22.6; fishing, 23.6; golf or miniature golf, 23.8; boating, canoeing or waterskiing, 24.3; swimming, 25.4; hiking or nature walks, 26.4; hunting or sport shooting, 28.5; picnicking, 29.2; and sightseeing or driving for pleasure, 32.3. For each of the 19 activities the median age of participants is below the statewide median of all individuals 5 or more years old, 34.9 years, since participation in each activity falls off with advancing age.

Just as the median age of participants in each of the 19 activities is below the median age for the population, the median total family income of participants in each of the 19 activities is above the median total family income for the population. The highest median incomes are for participants in snowskiing, tennis, street hockey, ice skating, golf or miniature golf, and boating, canoeing or waterskiing. The lowest median incomes are for participants in hunting or sport shooting, picnicking, sightseeing or driving for pleasure, and hiking or nature walks.

For each of the 19 activities, the median education of participants 20 or more years

old is higher than the median education for the population. Activities with the highest median education of participants 20 or more years old are snowskiing, tennis, street hockey, and football.

For each of the 19 activities, the median size of participants' households is higher than the median household size for the population.

Table 1.1.--MEDIAN CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS BY AGE AND SEX OF SUBJECT AND TOTAL FAMILY INCOME

	Age of subject	Total family income	Total family income	Education of subject	House- hold size	House- hold size	Age of head of house.	Age of head of house.	Education of head of house.	Education of head of house.
Unit	years	dollars	dollars	years	no.	no.	years	years	years	years
Individual or Household	I	H	I	I	H	I	H	I	H	I
Total	34.9	9,758	10,839	12.0	2.8	3.8	48.7	45.7	12.0	12.0
Age of subject of interview:										
5 - 9 years	7.0	12,169	12,040		4.6	4.9	35.7	36.9	12.4	12.3
10 - 19 years	14.5	11,863	12,039		4.5	5.1	43.8	43.6	12.0	12.0
20 - 29 years	24.2	10,710	10,944	12.5	2.9	3.4	27.2	28.5	12.4	12.3
30 - 44 years	37.4	12,283	12,403	12.1	3.9	4.4	38.3	38.8	12.2	12.1
45 - 64 years	53.5	9,637	10,449	11.9	2.2	2.8	56.2	54.7	11.3	11.9
65 plus	71.4	4,818	5,371	10.7	1.6	1.9	71.2	71.1	11.1	11.5
Sex of subject:										
Male	31.9	10,856	11,572	12.1	3.0	4.0	46.7	45.0	12.1	12.1
Female	37.2	9,105	11,440	12.0	2.5	3.7	50.6	46.4	12.0	12.0
Total family income:										
Under $4,000	65.1	2,000	2,000	9.8	0.9	2.0	68.2	66.1	9.3	9.2
$4,000 - $6,999	57.3	5,500	5,500	11.1	1.9	2.3	62.8	59.6	11.4	11.4
$7,000 - $9,999	30.5	8,500	8,500	11.9	3.0	3.9	46.2	45.1	11.9	11.8
$10,000 - $14,999	29.1	12,500	12,500	12.1	3.5	4.1	42.5	42.5	12.1	12.1
$15,000 plus	31.0	21,612	21,652	13.3	3.6	4.2	43.1	43.0	14.4	14.1

Table 1.2.--MEDIAN CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS BY EMPLOYMENT AND EDUCATION OF SUBJECT, HOUSEHOLD SIZE, AND CAR OWNERSHIP

	Age of subject	Total family income	Total family income	Education of subject	Household size	Household size	Age of head of house.	Age of head of house.	Education of head of house.	Education of head of house.
Unit	years	dollars	dollars	years	no.	no.	years	years	years	years
Individual or Household	I	H	I	I	H	I	H	I	H	I
Total	34.9	9,758	10,839	12.0	2.8	3.8	48.7	45.7	12.0	12.0
Employment status of subject:										
Employed	37.9	11,391	12,009	12.2	2.8	3.6	45.7	45.3	12.1	12.1
Unemployed	28.3	7,300	7,964	12.2	2.3	3.0	51.4	50.3	11.7	11.8
Not in labor force	28.7	8,705	9,898	11.8	2.8	4.0	52.6	46.1	11.9	12.0
Education of subject 20 or more years old:										
Up to 8 years	64.2	8,315	9,854	7.8	3.3	4.4	50.6	43.8	9.4	11.7
9 - 11 years	35.6	8,544	9,527	10.0	2.9	4.1	51.0	47.1	10.5	10.9
12 years	40.2	9,791	10,496	12.0	2.8	3.6	48.2	46.1	12.0	12.0
Some college	33.7	11,936	12,842	14.0	2.7	3.6	45.7	45.8	13.9	13.8
College graduate	42.8	14,482	16,443	16.2	2.4	3.2	45.0	46.0	16.2	16.2
Size of household:										
1 - 2 persons	58.1	7,537	8,679	11.9	1.8	1.9	60.3	59.6	11.9	11.9
3 - 4 persons	31.9	11,522	11,691	12.1	3.5	3.6	43.1	44.6	12.1	12.1
5 plus	20.2	12,153	11,972	12.1	5.4	5.6	41.3	42.0	12.1	12.1
Car ownership:										
Own a car	33.6	10,523	11,328	12.1	3.0	3.9	46.9	45.0	12.1	12.1
No car	61.2	3,766	4,525	11.5	1.0	2.0	67.9	64.5	10.4	10.5

Table 1.3.--MEDIAN CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS BY AGE, EDUCATION, EMPLOYMENT STATUS, AND RACE OF HEAD OF HOUSEHOLD

	Age of subject	Total family income	Total family income	Education of subject	House-hold size	House-hold size	Age of head of house.	Age of head of house.	Education of head of house.	Education of head of house.
Unit	years	dollars	dollars	years	no.	no.	years	years	years	years
Individual or Household	I	H	I	I	H	I	H	I	H	I
Total	34.9	9,753	10,839	12.0	2.3	3.8	48.7	45.7	12.0	12.0
Age of head of household:										
Up to 29 years	24.7	10,539	10,862	12.4	2.7	3.1	25.6	25.8	12.5	12.4
30 - 44 years	30.0	12,459	12,507	12.1	4.2	4.7	37.1	37.7	12.2	12.1
45 - 64 years	47.0	10,113	10,928	12.0	2.7	3.6	53.9	52.5	11.9	12.0
65 plus	69.4	5,030	5,579	11.6	1.7	2.0	71.4	71.1	10.9	11.1
Education of head of household:										
Up to 8 years	54.5	5,697	6,925	8.1	2.0	2.7	64.3	59.1	7.7	7.8
9 - 11 years	39.9	8,367	9,197	10.4	2.6	3.3	52.0	47.7	10.0	10.0
12 years	32.0	9,909	10,595	12.0	3.1	4.0	46.2	44.2	12.0	12.0
Some college	30.7	13,997	15,371	15.1	2.9	3.9	42.3	42.5	15.8	15.8
Employment status of head of household:										
Employed	30.8	11,586	12,030	12.1	3.3	4.1	43.7	43.2	12.1	12.1
Unemployed	27.0	6,785	7,333	12.0	2.5	3.6	44.0	44.4	11.7	11.8
Not in labor force	64.3	5,038	5,657	11.7	1.8	2.2	68.4	66.8	11.4	11.4
Race of head of household:										
White	34.9	9,870	11,018	12.1	2.8	3.8	48.8	45.6	12.0	12.1
Nonwhite	34.3	7,527	8,108	11.7	2.5	4.2	48.4	47.6	11.6	11.7

Table 1.4.--MEDIAN CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS BY UNIFORM PLANNING REGION AND POPULATION DENSITY

	Age of subject	Total family income	Total family income	Education of subject	Household size	Household size	Age of head of house.	Age of head of house.	Education of head of house.	Education of head of house.
Unit	years	dollars	dollars	years	no.	no.	years	years	years	years
Individual or Household ..	I	H	I	I	H	I	H	I	H	I
Total	34.9	9,758	10,839	12.0	2.8	3.8	48.7	45.7	12.0	12.0
Uniform Planning Region:										
Region one	32.1	11,173	12,380	12.1	2.7	3.9	47.3	45.3	12.2	12.2
Region two	30.8	10,362	11,305	12.1	2.7	3.6	47.2	44.4	12.0	12.0
Region three	38.9	8,500	9,195	12.0	2.9	3.7	51.7	48.2	11.9	12.0
Region four	32.9	9,035	10,608	12.0	2.4	3.1	49.5	45.0	11.8	11.9
Region five	39.9	7,979	8,822	11.9	2.4	3.4	51.3	46.7	11.9	11.9
Region six	32.2	10,474	11,122	12.0	2.9	3.9	46.0	43.6	12.0	11.9
Region seven	37.8	8,912	9,662	11.9	2.8	3.8	50.3	46.6	11.8	11.9
Region eight	29.9	8,687	9,449	12.0	2.9	3.9	54.5	47.4	11.8	11.8
Region nine	32.7	9,590	10,552	12.0	3.1	4.2	46.8	43.4	11.9	12.0
Region ten	37.2	9,893	10,040	12.1	2.8	3.8	49.7	46.7	12.1	12.1
People per square mile:										
Under 1,000	35.3	9,412	10,176	12.0	2.9	3.9	48.7	45.5	12.0	12.0
1,000 - 5,999	35.3	9,861	10,962	12.0	2.8	3.8	48.8	45.7	12.0	12.0
6,000 plus	34.1	9,837	11,030	12.1	2.6	3.8	48.7	45.9	12.1	12.1

Table 1.5.--MEDIAN CHARACTERISTICS OF INDIVIDUALS AND HOUSEHOLDS BY ACTIVITIES DONE BY SUBJECT IN PREVIOUS YEAR

	Age of subject	Total family income	Total family income	Education of subject	Household size	Household size	Age of head of house.	Age of head of house.	Education of head of house.	Education of head of house.
Unit	years	dollars	dollars	years	no.	no.	years	years	years	years
Individual or Household ...	I	H	I	I	H	I	H	I	H	I
Total	34.9	9,758	10,839	12.0	2.8	3.8	48.7	45.7	12.0	12.0
Swimming	25.4	11,858	12,263	12.3	3.6	4.3	41.1	41.9	12.3	12.2
Picnicking	29.2	10,656	11,386	12.2	3.2	4.1	44.1	43.1	12.1	12.1
Boating, canoeing or waterskiing	24.3	12,127	12,737	12.4	3.3	4.1	41.4	42.0	12.3	12.3
Fishing	23.6	11,577	12,064	12.1	3.6	4.3	42.6	42.4	12.1	12.1
Hunting or sport shooting .	28.5	10,899	11,289	12.1	3.3	4.1	41.2	41.8	12.0	12.0
Horseback riding	18.3	11,656	12,378	12.4	3.6	4.4	37.0	40.4	12.3	12.2
Hiking or nature walks	26.4	11,028	11,605	12.3	3.3	4.1	42.2	42.2	12.2	12.2
Camping	22.6	11,350	12,025	12.2	3.7	4.4	40.8	41.4	12.2	12.1
Off-road motorcycling or riding snowmobiles	21.1	11,793	12,356	12.3	3.6	4.3	37.9	40.1	12.1	12.1
Sightseeing or driving for pleasure	32.3	10,551	11,470	12.1	2.9	3.9	46.3	44.4	12.1	12.1
Tennis	21.5	13,457	13,942	14.2	3.5	4.3	39.1	41.9	13.3	12.7
Golf or miniature golf	23.8	12,797	13,165	12.5	3.4	4.1	41.5	42.3	12.4	12.3
Basketball	17.8	12,202	12,483	12.7	3.9	4.5	40.1	42.2	12.3	12.2
Baseball or softball	18.3	12,174	12,399	12.3	3.9	4.6	39.0	41.0	12.2	12.1
Football	16.9	19,709	12,607	13.2	4.0	4.7	39.1	41.7	12.2	12.1
Street hockey	13.6	13,387	13,721	13.9	4.5	5.1	40.4	41.2	12.2	12.2
Bicycling	20.3	12,173	12,545	12.4	3.8	4.4	39.6	41.1	12.3	12.2
Snow skiing	20.5	14,310	15,168	15.0	3.6	4.8	39.9	42.9	15.1	14.5
Ice skating	18.6	12,800	13,211	12.5	3.9	4.5	39.3	41.1	12.4	12.3

Chapter 2.--WEEKEND PARTICIPATION OF INDIVIDUALS IN THREE SELECTED ACTIVITIES

The first question in the survey relating to recreation per se dealt with the respondent's participation in three specific types of activities on the Saturday or Sunday immediately prior to the interview. The three activities were: (1) visiting a museum or zoo, (2) attending a cultural event or concert, and (3) attending a live amateur or professional sporting event.

Weekend participation in three selected activities by age, sex, and family income of subject

On a summer Saturday or Sunday approximately a fifth, 20.7%, of individuals aged 5 and over visit a museum or zoo, attend a cultural event or concert, or attend a live amateur or professional sporting event. Attendance at a sporting event is roughly twice as common as attendance at a cultural event or concert or visiting a museum or zoo; 12.2% of individuals attended a sporting event compared to 6.7% for a cultural event or concert, and 5.3% for a museum or zoo. These figures were obtained by inquiring as to the most recent Saturday or Sunday, without regard to the weather.

Visiting a museum or zoo is most common in the 5 to 9 age category where 10.2% visited a museum or zoo, compared to 5.3% for all individuals. (2-001)

Below 45 years of age weekend participation in these activities is above average, with the peak being in the 10 to 19 age category, where 27.9% participated in at least one of the three activities. In the 45 to 64 age bracket the percentage drops to 15.9%, and in the 65 and older category it drops still further to 9.0%. (2-001)

Male participation is appreciably greater than female participation, the difference being accounted for mainly by a far greater tendency on the part of males to visit sporting events, 16.1% vs. 8.7%. Females show a slightly greater tendency than males to visit a museum or zoo or attend a cultural event or concert. (2-001)

Weekend participation in the three activities has a strong positive correlation with total family income. For individuals with family incomes under $7,000, only 11.3% participate compared to 19.3% in the $7,000 to $9,999 category, 22.3% in the $10,000 to $14,999 category, and 26.7% in the $15,000 and over category. While all three participation rates increase steadily with income, the most dramatic increase is for attendance at live amateur or professional sporting events. In the $15,000 and over category 15.4% attend a live amateur or professional sporting event compared to only 5.7% in the under $4,000 category. (2-001)

There is a slightly greater tendency for individuals with the very lowest family incomes to attend a cultural event or concert than for individuals in the $4,000 to $6,999 family income category. With this single exception, weekend participation rates in all three activities increase with income. (2-001)

Weekend participation by labor force status and education of subject, size of household, and car ownership

Unemployed individuals are more likely to participate in one of the three weekend activities than are employed individuals or those not in the labor force; 24.6% of the unemployed participate in one of the three activities compared to 22.5% of those employed and 19.2% of those not in the labor force. The major difference is in attendance at museums or zoos where 12.0% of the unemployed visit compared to 4.8% of the employed. (2-002)

Among individuals at least 20 years of age the weekend participation in the three activities has a very strong positive correlation with education. For individuals with up to 8 years of education only 7.3% participate, compared to 11.0% of those with 9 to 11 years of schooling, 18.3% of those with 12 years, 25.0% of those with some college, and 28.8% of college graduates. (2-002)

Participation also has a strong positive correlation with size of household, indicating that these activities tend to be family-outing type of activities. Among one or two person households only 15.1% of individuals participate compared to 23.9% of individuals in households with five persons or more. (2-002)

Car ownership is a very strong determinant of participation. Among households owning a car 21.3% of individuals participate compared to only 11.9% of individuals in households not owning a car. This type of pattern applies for all three activities. (2-002)

Weekend participation by age, education, labor force status, and race of head of household

Individuals in households with heads aged 30 to 44 are more likely to participate in one of the three weekend activities than are individuals in either younger or older households. Only 12.0% of individuals in households whose heads are 65 or older participate in one of the three activities. (2-003)

Participation is positively correlated with the education of the head of the household. Among households with heads having more than 12 years of schooling 28.6% participate compared to 14.3% for individuals in households whose heads had up to 8 years of schooling. Although unemployed individuals are somewhat more likely to participate in one of the three weekend activities, individuals in households where the head is unemployed are somewhat less likely to participate; 17.2% for those with unemployed household heads, compared to 22.4% for those with employed household heads. The percentage for those individuals whose head is not in the labor force is comparable to that for the 65 and older category, 13.1%. (2-003)

Overall participation is comparable for white and nonwhite households, 20.8% for white and 20.0% for nonwhite. Nonwhite households are somewhat less likely to visit a museum or zoo and are somewhat more likely to attend a cultural event or concert or a sporting event. (2-003)

Weekend participation by region and population density

Participation in the three designated weekend activities increases with increasing population density. In the lowest population density areas, 17.5% of individuals participate compared to 19.4% in the medium density areas, and 24.0% in the high density areas. The regions with participation higher than the statewide rate of 20.8% are regions one, 21.8%; two, 21.7%; four, 25.4%; eight, 26.1%; nine, 22.8%; and ten, 23.0%. The two lowest participation regions are five, 10.2%; and three, 15.1%. (2-252)

Weekend participation in the three selected activities in relation to annual recreation participation

An individual who has participated at least once in the previous year in any of the 19 recreation activities dealt with in the survey is appreciably more likely to participate in one of the three weekend activities. In particular, individuals who have participated in at least one of the more active sports in the past year are substantially more likely to attend a live amateur or professional sporting event than are those who have not. The likelihood of a person's visiting a museum or zoo or attending a cultural event or concert is much less dependent on the general pattern of participation of the individual in the 19 survey activities. (2-004, 005)

Chapter 3.--SUMMER RECREATION ON GOOD-WEATHER SUNDAYS

After the respondent was questioned about the three activities on the most recent Saturday or Sunday, the respondent was asked to think about the most recent Sunday when there was good weather and then was asked for each of 17 designated activities whether he did the activity on that particular Sunday. The activities and the percent of individuals aged 5 and older participating are as follows:

	Percent participating
1. Swimming	33.7
2. Picnicking	28.2
3. Boating, canoeing or waterskiing	7.3
4. Fishing	7.4
5. Hunting or sport shooting	1.0
6. Tennis	7.4
7. Golf or miniature golf	6.9
8. Basketball	5.2
9. Baseball or softball	10.1
10. Football	2.4
11. Street hockey	0.5
12. Bicycling	21.5
13. Horseback riding	2.1
14. Hiking or nature walks	11.4
15. Camping	5.2
16. Off-road motorcycling	1.8
17. Sightseeing or driving for pleasure	30.5

If the respondent did an activity, he was asked whether it was in Pennsylvania.

The number or percent of people participating on a good weather summer Sunday may be viewed as a measure of peak recreation demand. In this connection the participation percentages should be interpreted as peak local demand rather than statewide aggregate demand on a particular Sunday, since the latter would include both localities

having good weather and localities having bad weather. The survey percentages, therefore, may be expected to exceed appreciably the actual participation across the State on any particular Sunday or what would have been obtained if respondents had been questioned about the most recent Sunday regardless of weather.

In what follows, we shall have occasion to discuss the average number of activities participated in by the respondent population. It should be pointed out that the reported number of activities participated in by a respondent is influenced by the activity list itself. For example, if waterskiing had been separated from boating and canoeing, respondents who did both boating and waterskiing would have been counted for each of two activities rather than for one combined activity. Moreover, if the list had been extended to include additional activities such as soccer, badminton, bowling, etc., then the average number of activities participated in would have increased accordingly.

The questioning did not have an outing framework, which made it possible for participation at home or close to home to be included. Although indoor participation was not explicitly excluded, the proportion of indoor participation is naturally quite small since the questioning concerned good-weather summer Sundays.

In general, the activities were not defined to the respondent. Thus, for example, the figures for tennis may include some paddle tennis or practice against a wall or backboard. Similarly, the definition of camping depended on the respondent's interpretation of the term and included use of campers, backpacking and wilderness camping, and in a few instances staying in a summer cabin. Some respondents interpreted hiking or nature walks as including walks in the neighborhood. However, if the respondent asked what was meant, he was told that there had to be off-pavement walking of a substantial nature. Moreover, interviewers were instructed to be alert to the possibility that the respondent was thinking in terms of neighborhood walks. An effort was made to exclude walks about the neighborhood.

Generally, no distinction was made as to whether an activity was done for purely recreation purposes. For example, bicycling in connection with a trip to the store would be included.

Good weather summer Sunday participation

Of the 17 listed activities, the four most commonly participated in on good weather summer Sundays are: swimming, 33.7%; sightseeing or driving for pleasure, 30.5%; picnicking, 28.2%; and bicycling, 21.5%. The two next most common activities, hiking or nature walks, 11.4%, and baseball, 10.1%, have substantially lower participation. Frequencies for boating, canoeing or waterskiing, fishing, tennis, golf, basketball, and camping are all comparable at from 5 to 7 percent. The average number of activities participated in for all surveyed individuals is 1.83. In other words, the average individual participates in slightly more than one-tenth of the listed activities. (2-006)

Respondents were asked whether their participation on the most recent good weather Sunday was in Pennsylvania. The activity with the lowest percentage of participants in Pennsylvania relative to all participants was boating, canoeing or waterskiing with 82.4% of participation in Pennsylvania. The other activities with the lowest fractions of within-Pennsylvania participation are camping, 85.1%; fishing, 87.0%; hiking or nature walks, 88.4%; and swimming, 89.7%. The remaining activities all have within-Pennsylvania participation well in excess of 90%. (2-011)

An average percentage of recreation participation in Pennsylvania on a good weather summer Sunday may be obtained by dividing the total number of persons participating in Pennsylvania in all activities, by the total number of persons participating in all activities. This ratio is 92.7%. (2-011) In other words, 7.3% of the good-weather-summer-Sunday activity days are out of Pennsylvania. It should be pointed out that if a person participated in both swimming and picnicking on the same day, an activity day would be counted for each of the two activities. If a person participated in swimming, boating, canoeing or waterskiing, fishing, and camping all on the same Sunday, 4 activity days would be generated. (2-011)

Good weather summer Sunday participation by age, sex, and family income

A number of the 17 listed activities are highly sensitive to age. These are swimming, tennis, basketball, baseball, football, bicycling, and horseback riding. Activities

for which participation is much less sensitive to age are picnicking, boating, fishing, hiking or nature walks, camping, and sightseeing or driving for pleasure. (2-006)

The activities for which there are the greatest differences in participation depending on sex are fishing, golf, basketball, baseball, football, and off-road motorcycling. Female participation exceeds male participation in picnicking, horseback riding, hiking or nature walks, and sightseeing or driving for pleasure. In all other activities male participation exceeds female. (2-006)

The activities for which frequency increases strongly with income are swimming, boating, golf, basketball, baseball, and bicycling. Typically, participation in an activity is most frequent in the $15,000-and-over family income category. Exceptions to this are picnicking, baseball, football, horseback riding, hiking or nature walks, and off-road motorcycling. (2-006)

Peak recreation participation by labor force status and education of subject, size of household, and car ownership

In general, employed persons are somewhat more likely to participate in an activity on good weather summer Sundays than are unemployed persons. The only exceptions observed are for horseback riding, camping, and sightseeing or driving for pleasure and these are not statistically significant. (2-007)

Activities whose frequencies are strongly correlated with the education of the individual are swimming, boating, tennis, golf, and basketball. Among all activities, tennis is the most highly correlated with education. A few activities show diminished participation among college graduates, namely picnicking, bicycling, and sightseeing or driving for pleasure. (2-007)

Activities which are primarily group activities or which are participated in most heavily by children and teenagers are the activities most highly correlated with size of household. These are swimming, baseball, and bicycling. Activities which are noticeably unresponsive to household size are boating, fishing, tennis, golf, horseback riding, camping, off-road motorcycling, and sightseeing or driving for pleasure. (2-007)

Almost universally, car ownership increases recreation participation on a good weather Sunday. For example, in swimming, individuals in car-owning households are more than three times as likely to swim as those in noncar households; 35.2% vs. 11.5%. In picnicking the ratio approaches 2 to 1; 29.0% vs. 16.5%. (2-007)

Peak participation and race

For most activities whites are far more likely to participate on a good weather summer Sunday than nonwhites. For example, in swimming 34.4% of white individuals participate compared to 16.5% of nonwhite. Basketball is an outstanding exception where 4.7% of whites participate compared to 13.8% of nonwhites. The nonwhite participation is also higher for football. The participation rates in picnicking and horseback riding are more equal than for most other activities. (2-008)

Peak participation by region and population density

Participation in swimming is higher among residents of medium density areas, 35.4%, than statewide, 33.7%. The regions with higher-than-average participation in swimming are one, 42.1%; two, 37.7%; four, 42.3%; and six, 34.8%.

Picnicking is more common among residents of medium density areas, 28.9%, than statewide, 28.1%. Only five regions exceed the statewide picnicking participation: regions five, 32.9%; seven, 37.4%; eight, 30.6%; nine, 29.8%; and ten, 29.2%. (2-253)

Good weather summer Sunday participation in boating, canoeing or waterskiing is negatively correlated with population density: among residents of low density areas, 9.0% of individuals participate; in the medium density areas, 7.1%; in the high density, 6.7%. The statewide boating participation is exceeded in regions one, 8.1%; three, 9.6%; four, 10.0%; and nine, 9.9%. (2-253)

Participation in fishing on a good weather summer Sunday is negatively correlated with population density: among residents of low density areas, 9.0% of individuals participate; in the medium, 7.3%; and in the high, 6.7%. The regions whose fishing participation exceeds the statewide participation of 7.4% are three, 8.4%; four, 15.4%;

seven, 10.0%; nine, 11.1%; and ten, 8.6%. (2-253)

Summer participation in sport shooting is heavier among residents of low density areas, 1.1%; and in the medium, 1.3%; than in the high, 0.7%. The regions which exceed the statewide participation of 1.0% are four, 3.1%; eight, 3.3%; nine, 2.0%; and ten, 1.2%. (2-253)

Good weather summer Sunday participation in tennis is positively correlated with population density: in low density areas, 5.5%; in the medium, 6.1%; and high, 10.0%. The regions which exceed the statewide participation of 7.4% are one, 10.4%; and ten, 8.9%. On the down side participation ranges to a low of 1.6% in region eight. (2-253)

For golf or miniature golf the statewide participation of 6.9% is exceeded among residents of high density areas, 8.0%; and in regions two, 8.6%; three, 7.6%; four, 11.5%; nine, 8.0%; and ten, 9.2%. (2-253)

Good weather summer Sunday participation in basketball is positively correlated with population density: in the low, 3.8%; medium, 5.0%; and high, 6.1%. The regions which exceed the statewide basketball participation of 5.2% are regions one, 6.6%; two, 5.3%; four, 5.4%; and ten, 5.3%. (2-253)

The statewide participation of 10.1% in baseball or softball is exceeded among residents of low density areas, 10.8%; and high, 10.3%; and in regions two, 10.6%; seven, 11.6%; eight, 12.2%; nine, 10.2%; and ten, 11.6%. (2-253)

Good weather summer Sunday participation in football is higher among residents of high density areas, 3.9%, than statewide, 2.4%. The regions which have a heavier-than-average participation are one, 3.0%; two, 4.5%; and nine, 3.9%. (2-253)

Good weather summer Sunday participation in street hockey statewide, 0.5%, is exceeded among residents of low density areas, 0.7% and high density areas, 0.8%; and in regions one, 1.2%; and seven, 1.7%. (2-253)

For bicycling, the statewide good weather summer Sunday participation, 21.6%, is exceeded among residents of low density areas, 23.6%; and medium density areas,

22.7%. The regions which have a heavier participation than statewide are regions one, 22.9%; two, 23.8%; four, 29.2%; six, 24.0%; eight, 28.2%; and nine, 30.7%. (2-253)

Horseback riding is most common among residents of low density areas, 3.0%, compared to the statewide participation of 2.1%, which is exceeded in regions three, 2.2%; four, 4.6%; five, 3.5%; seven, 5.9%; nine, 3.7%; and ten, 2.2%. (2-253)

Hiking or nature walks are more common as a good weather summer Sunday activity among residents of low density areas, 12.4%; and medium, 12.8%; than statewide, 11.3%. Higher-than-average participation occurs in regions two, 11.7%; four, 16.9%; five, 15.5%; seven, 19.9%; and eight, 17.1%. (2-253)

Participation in camping among residents of medium density areas, 6.9% is heavier than statewide, 5.2%. The statewide participation is exceeded only in regions five, 9.3%; six, 6.5%; seven, 7.6%; eight, 11.8%; and nine, 7.9%. (2-253)

Off-road motorcycling is more common among residents of low, 2.1% and medium, 2.3% density areas than statewide, 1.8%. It is also more common in regions three, 2.1%; five, 5.3%; and six, 2.5%.

Sightseeing or driving for pleasure is slightly more common among residents of low density areas, 31.5%; and in the medium density areas, 30.9%; than statewide, 30.4%. The regions having higher-than-average participation are regions two, 30.5%; four, 34.6%; five, 35.5%; six, 35.4%; seven, 34.6%; eight, 36.7%; and nine, 31.7%. The participation in this activity is more uniform geographically than the participation in any other activity. (2-253)

Note that there is a negative correlation between peak participation and population density for boating, fishing, sport shooting, bicycling, horseback riding, hiking or nature walks, and off-road motorcycling. It is emphasized that the population density and region are for the place where the respondent resides, not for the place where the participation occurs. The negative correlation between participation and population density does not indicate that people travel to lower-density areas to participate in the specified activities. Rather, it indicates that participation in the specified activities is higher

among residents of lower-density areas, reflecting the fact that they have greater access to the specified activities.

Good weather summer Sunday participation in relation to annual participation

Swimming is the most common good weather summer Sunday activity. When respondents are grouped according to the activities in which they have participated in the past year, swimming remains the most common good weather summer Sunday activity in each group. The only exception is among individuals who participated in sightseeing or driving for pleasure in the past year, among whom 36.9% swam on the most recent good weather Sunday and 40.6% went sightseeing or driving for pleasure. As an example, among individuals who played tennis in the past year, 54.1% swam on the most recent good weather Sunday and only 30.9% played tennis. (2-009, 010)

Chapter 4.--ANNUAL PARTICIPATION IN RECREATION

After respondents were questioned about their recreation activity on the most recent good weather Sunday, for each activity which they did not participate in on that Sunday they were asked whether they had participated in the activity at any time over the past year. Three winter activities were added to the list: riding snowmobiles (included with off-road motorcycling), snow skiing, and ice skating. The past year was defined as the period between the time of the interview and the same time last year.

For the most recent good weather Sunday the average number of activities participated in for all surveyed individuals is 1.83 (out of 17). For the any time during the past year participation it is 5.79 (out of 19). In interpreting this figure one should bear in mind that the size of the figure is dependent on the makeup of the list. For example, if street hockey were omitted, the average number of activities per person would drop to 5.75. If sightseeing or driving for pleasure were omitted, the average number of activities would be reduced to 5.07. (2-016)

The 19 survey activities and the percent of individuals participating at least once during the past year are as follows:

	Percent participating
1. Swimming	66.7
2. Picnicking	70.6
3. Boating, canoeing or waterskiing	30.7
4. Fishing	31.9
5. Hunting or sport shooting	14.0
6. Tennis	24.0
7. Golf or miniature golf	29.0
8. Basketball	22.2
9. Baseball or softball	32.4
10. Football	16.5
11. Street hockey	4.6
12. Bicycling	47.9
13. Horseback riding	11.1
14. Hiking or nature walks	40.9
15. Camping	26.3
16. Off-road motorcycling, snowmobiling	12.0
17. Sightseeing or driving for pleasure	72.5
18. Snow skiing	4.9
19. Ice skating	21.2

Of the 19 surveyed activities, three stand out from the others in terms of the fraction of individuals participating at least once in the previous year, namely sightseeing or driving for pleasure, picnicking, and swimming, in that order. A total of 72.5% of individuals 5 years of age or older engaged in sightseeing or driving for pleasure; 70.6% in picnicking; and 66.7% in swimming.

Annual participation by age, sex, and family income

The relative ranking among sightseeing, swimming, and picnicking varies by age and income. Swimming is first place in the 5-9 and 10-19 year age categories with 93.0% and 91.0%, respectively, participating at least once in the previous year. In the next two age categories, 20-29 and 30-44, picnicking moves into first place with 85.0 and 77.6 percent participating, respectively. In the oldest two age categories, 45-64 and 65 and over, sightseeing or driving for pleasure moves into first place with 69.2% and 51.1%, respectively, of individuals participating.

There is a dramatic reduction in swimming participation after age 64. In the 45-64 age category, 45.0% participated compared to only 11.7% for the 65 and older category. The annual participation ranking among sightseeing, picnicking, and swimming is the same for males as for females, with male participation being approximately 2 to 3 percentage points above female. (2-016)

In the two income categories under $7,000, sightseeing or driving for pleasure is in first place with 47.4% and 64.0%, respectively, participating in the under $4,000 and $4,000-$6,999 categories. In the two income classes between $7,000 and $14,999, picnicking moves into first place with 73.9% of individuals participating in families with incomes of $7,000 to $9,999 and 79.4% of individuals participating in families with incomes of $10,000 to $14,999. In the $15,000 and over category, swimming moves into first place with 83.6% participating compared to 80.7% for sightseeing and 74.0% for picnicking. (2-016)

The male-dominated activities are fishing, 43.8% of males vs. 21.5% of females participating; hunting or sport shooting, 26.6% vs. 3.0%; basketball, 31.9% vs. 13.7%;

baseball or softball, 42.3% vs. 23.7%; football, 27.9% vs. 6.4%; street hockey, 8.1% vs. 1.5%; and off-road motorcycling or riding snowmobiles, 15.3% vs. 9.2%. (2-016)

Female participation exceeds male participation only in picnicking, 71.6% of females vs. 69.4% of males; horseback riding, 11.9% vs. 10.2%; hiking or nature walks, 41.5% vs. 40.2%; and sightseeing, 73.6% vs. 71.2%. In the remaining activities--swimming, boating, tennis, golf, bicycling, camping, snow skiing, and ice skating--male participation is heavier than female but not overwhelmingly so. However, in golf or miniature golf 34.0% of males participate compared to 24.5% of females, so that there would have been some justification for including golf with the list of male-dominated activities. (2-016)

Among all individuals 5 years of age or older the average number of the surveyed activities participated in in the past year is 5.79. This average is strongly responsive to age, with the peak occurring among respondents 10 to 19 years of age. For individuals 5 to 9 years of age the average is 7.18; for those 10 to 19 years of age, 9.22; for those 20 to 29 years of age, 7.58; 30 to 44, 5.76; 45 to 64, 3.47. Among those 65 and over the average number of activities declines to 1.47. (2-016)

The average number of activities participated in by males is slightly higher than by females, 6.56 vs. 5.12. (2-016)

Recreation is positively correlated with income. The average number of activities participated in in the past year by individuals in families with incomes under $4, 000 is 2.68, compared to 3.29 for those with incomes $4, 000 to $6, 999; 5.70 for $7, 000 to $9, 999; 6.57 for $10, 000 to $14, 999; and 7.31 for individuals in families with incomes $15, 000 and over. Thus, individuals in families in the top income category participate in 2.7 times as many of the survey activities as individuals in the lowest income category. (2-016)

Annual participation by education of subject, size of household, and car ownership

Participation in most activities is positively correlated with education. For example, among individuals 20 years of age and older who have had less than 9 years of

schooling, only 1.4% played tennis in the past year compared to 47.0% of college graduates. The corresponding figures for golf or miniature golf are 2.0% for less than 9 years education and 41.8% for college graduates. In several of the activities a slightly smaller percentage of college graduates participate than do those who have had just some college, namely picnicking, hunting or sport shooting, horseback riding, and off-road motorcycling or riding snowmobiles. (2-017)

The number of activities a person has participated in over the past year is also positively correlated with education. Among individuals 20 or more years of age with less than 9 years of schooling the average number of activities participated in is 2.02; in the 9 to 11 years of schooling category it is 3.46. Among individuals with just 12 years of schooling the mean number of activities is 4.66; among those with some college, 6.18; and among college graduates 6.88. (2-017)

Persons in larger households are far more likely to participate in a variety of recreational activities than are individuals in smaller households. Individuals in 1 or 2 person households participated in an average of 3.43 activities compared to 6.14 for those in 3 or 4 person households, and 7.15 for those in households with 5 or more persons.

Individuals in households owning a car participated on an average in 6.04 activities compared to only 2.10 for individuals in households not owning cars. (2-017)

Annual participation by age, education, labor force status, and race of head of household

The number of activities participated in diminishes substantially for individuals in households with the head aged 45 and over. In the 2 youngest age categories, below 30, and 30 to 44 years, the average number of activities participated in is 7.17 and 7.16, respectively. But in the age category 45 to 64 the average number declines to 5.40, and for those 65 and over it declines drastically to 1.99. (2-018)

The average number of activities participated in is positively correlated with education of the head of the household. For individuals in households whose head had less than 9 years of schooling, the average number of activities participated in is 3.61; for

those with 9 to 11 years of schooling, 4.87; for those with just 12 years of schooling the average is 6.01; and for those with at least some college, 6.59. Individuals in households where the head is currently employed participate in an average of 6.36 activities compared to 5.60 for those in households where the head is unemployed and 2.97 for individuals where the head of the household is not in the labor force. This last reduction is of course primarily an age effect. (2-018)

White persons participate in far more activities than nonwhite, 4.80 vs. 3.75. The differences between white and nonwhite participation are particularly dramatic in swimming; boating; canoeing or waterskiing; fishing; hunting or sport shooting; tennis; golf or miniature golf; camping; off-road motorcylcing or riding snowmobiles; snow skiing; and ice skating. (2-018)

Annual participation by region and population density

It is again emphasized that region and population density are for the place where the respondent resides, not for the place where the participation occurs.

At-least-once-a-year participation in swimming is slightly related to population density, 64.4% in the low density places; 66.6% in the medium; and 68.0% in the high. The regions which exceed the statewide participation of 66.7% are regions one, 74.7%; six, 66.9%; and nine, 71.5%. (2-255)

Participation in picnicking in the medium density places, 71.3%, is higher than the statewide participation, 70.5%, which is exceeded in regions four, 74.6%; five, 74.0%; six, 71.6%; eight, 77.6%; nine, 75.7%; and ten, 73.7%. (2-255)

At-least-once-a-year participation in boating, canoeing or waterskiing is slightly inversely related to population density, 33.0% in the low density places; 30.8% in the medium; and 29.3% in the high. The statewide participation of 30.6% is exceeded in regions one, 32.0%; two, 30.8%; four, 37.7%; six, 31.1%; and nine, 39.0%. (2-255)

At-least-once-a-year participation in fishing is rather strongly inversely related to population density, 37.7% in the low density places; 32.8% in the medium; and 28.0%

in the high. The statewide participation of 32.0% is exceeded in regions four, 33.8%; six, 33.7%; seven, 33.9%; eight, 34.3%; nine, 45.6%; and ten, 32.3%. (2-255)

At-least-once-a-year participation in hunting or sport shooting is very strongly inversely related to population density, 20.8% in the low density; 16.0% in the medium density; and 8.1% in the high density places. Participation varies strongly by region, being much heavier in the western part of the State. The regions for which the participation exceeds the statewide participation of 14.0% are four, 16.2%; five, 25.5%; six, 15.2%; seven, 21.3%; eight, 20.8%; nine, 27.1%; and ten, 14.1%. The Philadelphia metropolitan area, region one, has a participation of only 5.5%, which is less than half that of the next lowest region, region two with 11.2%. Region ten containing Pittsburgh is only slightly above the statewide participation. (2-255)

In tennis, participation in the high density places, 26.3%, slightly exceeds the statewide participation of 24.0%. The only regions exceeding this participation are regions one, 30.1%; and two, 29.5%. (2-255)

The at-least-once-a-year participation in golf or miniature golf is weakly related to population density; 26.3% in the low density places; 28.8% in the medium; and 30.5%, in the high. The statewide participation of 29.0% is exceeded in regions one, 31.9%; two, 36.5%; nine, 34.5%; and ten, 31.5%. The lowest participation is in region seven, 10.2%. (2-255)

The participation in basketball is very weakly related to population density, 21.5% in the low density places, 21.9% in the medium, and 22.8% in the high. The statewide participation of 22.1% is exceeded in regions one, 23.6%; two, 23.0%; six, 23.7%; and nine, 22.8%. Region eight has a participation of 11.0%, slightly below half of the statewide participation. (2-255)

Participation in baseball is higher in the low density places, 36.8% than statewide, 32.3%. The statewide participation is exceeded only in regions four, 39.2%; six, 34.3%; nine, 36.0%; and ten, 33.6%. (2-255)

In football, participation in the medium density places, 17.6%, and in the high,

16.6%, is above the statewide participation of 16.5%, which is exceeded in regions one, 17.9%; two, 20.0%; four, 18.5%; six, 20.0%; and nine, 17.6%. (2-255)

Participation in street hockey is very strongly related to population density, 2.8% in the low, 4.1% in the medium, and 6.2% in the high density places. Only two regions exceed the statewide participation of 4.6%, region one, 9.9% and ten, 5.0%. The participation falls to 0.7% in regions three and five and to 0.8% in region eight. (2-255)

Participation in bicycling is very slightly heavier in the low and medium density places, 48.5%, than statewide, 47.9%, which is exceeded in region one, 51.5%; four, 53.8%; five, 49.0%; six, 54.9%; eight, 54.7%; and nine, 55.1%. (2-255)

Participation in horseback riding is inversely related to population density, 14.3% in the low density places, 11.2% in the medium, and 9.4% in the high. It is definitely more common in western than in eastern Pennsylvania. The regions which exceed the statewide participation of 11.1% are two, 12.0%; four, 22.3%; seven, 13.0%; eight, 18.0%; nine, 15.7%; and ten, 12.3%. The lowest participation regions are three, 7.8%, and one, 7.9%. (2-255)

Participation in hiking or nature walks is inversely related to population density, 47.5% in the low density places; 40.7% in the medium; and 37.6% in the high. The statewide participation of 40.8% is exceeded in regions four, 50.0%; five, 45.9%; six, 42.2%; seven, 46.0%; eight, 45.7%; and nine, 51.8%. The participation is highly uniform across all regions. The lowest values are in regions three, 35.0%, and one, 37.7%. (2-255)

Participation in camping is rather strongly inversely related to population density, 30.6% in the low density places; 28.8% in the medium; and 21.0% in the high. The regions which exceed the statewide participation rate of 26.3% are two, 27.7%; four, 36.9%; five, 33.6%; six, 31.1%; seven, 28.0%; eight, 31.8%; and nine, 36.7%. The low participation regions are one, 21.3%; three, 23.1%; and ten, 23.7%. (2-255)

Participation in off-road motorcycling or riding snowmobiles is rather strongly inversely related to population density. In the low density places the participation is 17.3%,

in the medium, 14.3%, and in the high, 6.3%. The statewide participation of 12.0% is exceeded in regions two, 14.8%; three, 13.4%; four, 33.1%; five, 16.9%; eight, 25.7%; and nine, 22.3%. The lowest participation is in region one, 6.5%. (2-255)

Participation in sightseeing or driving for pleasure is relatively invariant with respect to region and population density. The statewide participation of 72.5% is exceeded only in the medium density places, 74.2%. The regions with higher-than-average participation are two, 74.7%; six, 73.4%; eight, 82.4%; and nine, 76.7%. The region with the lowest participation is region seven, 68.2%. (2-255)

Participation in snow skiing is inversely related to population density. Participation in the low density places is 7.0%; in the medium, 4.7%; in the high, 4.2%. The regions where the participation exceeds the statewide of 4.9% are one, 7.3%; two, 7.4%; and four, 14.6%. Skiing is clearly heavier in eastern than in western Pennsylvania. (2-255)

Participation in ice skating is inversely related to population density. Participation in the low density places is 23.1% compared to 21.8% for the medium density places and 19.5% for the high. The statewide participation of 21.2% is exceeded in regions one, 22.6%; two, 25.6%; three, 21.9%; four, 30.8%; and six, 22.6%. Participation in ice skating is more widespread in eastern than in western Pennsylvania. (2-255)

Annual participation in each activity in relation to other activities participated in

Some understanding of the interrelationship among recreation activities can be obtained by examining the percent of people who participate in each activity who also participate in another activity. For example, 92.9% of horseback riders swim. The percentage of people who swim ranges from a low of 73.6% of those who also hunt to 97.2% of snow skiers. In general, participants in outdoor games are far more likely to participate in swimming than are participants in other activities. (2-019, 020)

For picnicking, hikers have the highest picnicking participation, 90.4%, compared to 70.6% for all individuals. Snow skiers are more likely to participate in boating, canoeing or waterskiing than are participants in any other category, 77.7% vs. 30.7% for all

individuals. Hunters are more likely to participate in fishing than are participants in any other activity, 66.5% vs. 31.9% overall. For hunting or sport shooting the highest percent of individuals participating is among those who also participate in off-road motorcycling or riding snowmobiles. Tennis participation is greatest among snow skiers, 71.6% vs. 24.0% of all individuals. Golf or miniature golf is participated in most commonly by street hockey players and tennis players, 62.2% and 57.3%, respectively, compared to 29.0% for all individuals. (2-019, 020) Basketball playing is more common among street hockey players than among those who participate in any other activity. The same is true for football and bicycling, and street hockey in turn is participated in most heavily by football players. Horseback riding is more common among snow skiers than participants in any other activity. Participation in hiking or nature walks is most common among campers. Camping (like hunting) is most common among those who participate in off-road motorcycling or riding snowmobiles. Off-road motorcycling or riding snowmobiles in turn is most commonly participated in by snow skiers. The highest participation in sightseeing or driving for pleasure is among those who participate in hiking or nature walks. As might be expected because of climatic conditions, the highest percent participation in snow skiing is among ice skaters and conversely the highest participation in ice skating is among snow skiers. (2-019, 020)

Chapter 5.--NEW ACTIVITIES AND FACTORS PREVENTING PARTICIPATION IN ACTIVITIES

In addition to providing current participation rates for designated recreation activities, the survey was designed to provide indicators of growth in participation to be used in structuring a forecasting model for projections of future demand. Accordingly, the following questions were asked:

> Among the activities which you did in the past year, are there any which you had never done before the past year?
>
> (If yes) Which activities?
>
> (For each activity not participated in in the past year) Are you at all interested in (going/playing) ACTIVITY ?
>
> (If yes) What prevented you from ACTIVITY ?
>
> Among the activities which you did not do in the past year, are there any which you definitely plan to do in the coming year?
>
> (If yes) Which activities?

Recreation participation growth indicators

The numerical rate of growth of participation in an activity is indicated by the percent of all individuals who reported that they participated in the activity for the first time in the previous year. The relative rate of growth of participation in an activity is indicated by the percent of all participants in the activity who reported that they participated in the activity for the first time in the previous year. The activity most frequently named as having been done for the first time in the past year is boating, canoeing or waterskiing, which was done for the first time by 2.6% of all individuals or 8.4% of boating participants (see Table 5.1). Tennis was played for the first time by 2.4% of all individuals or 10.2% of tennis participants. (2-021)

Compared to boating, canoeing or waterskiing, tennis appears to be growing slightly less rapidly numerically, but it is enjoying a higher relative rate of growth. The next most important activity in terms of the number of new participants is off-road motorcycling or riding snowmobiles with 2.1% of all individuals or 17.3% of motorcycling-snowmobiling participants. The 4th largest activity in terms of numerical growth is camping with 2.0% of all individuals or 7.4% of campers. (2-021)

The largest relative rates of growth among all activities are enjoyed by snow skiing, where the percent of first-time participants amounts to 21.6%, and street hockey with 19.0% of new participants.

Naturally, first-time participation tends to be greatest in the younger age groups. For fishing, tennis, basketball, baseball or softball, football, bicycling, hiking or nature walks, snowmobiling, and ice skating the first-time percentages are highest in the 5 to 9 age groups. For hunting or sport shooting, golf or miniature golf, street hockey, horseback riding, camping, and snow skiing, the highest firt-time percentages are in the 10 to 19 year age group. (2-021)

For eight activities the first-time percentages for females exceed those for males. These activities are swimming; picnicking; boating, canoeing or waterskiing; fishing; basketball; baseball or softball; camping; snow skiing; and ice skating. (2-021)

Eight activities have highest first-time percentages in the $15,000 and over income category. These activities are swimming; boating, canoeing or waterskiing; tennis; baseball or softball; street hockey; horseback riding; off-road motorcycling or riding snowmobiles; and snow skiing. (2-021)

For eleven activities the first-time percentages are highest in one of the middle income categories. These activities are picnicking; fishing; hunting or sport shooting; golf or miniature golf; basketball; football; bicycling; hiking or nature walks; camping; sightseeing or driving for pleasure; and ice skating. Growth in these activities is related more to changing recreational preferences than to growth of income as such. (2-021)

Activities of interest to nonparticipants

Respondents were asked for each activity in which they did not participate in the previous year whether or not they were at all interested in participating in the activity. The activities with the greatest number of interested nonparticipants are horseback riding, with 16.1% of all individuals being interested nonparticipants; camping, 14.0%; boating, canoeing or waterskiing, 13.5%; and tennis, 11.5%. A number of activities are in the 7 to 10 percent range, namely fishing, 9.1%; golf or miniature golf, 7.5%; hiking or nature walks, 7.2%; off-road motorcycling or riding snowmobiles, 9.2%; snow skiing, 9.6%; and ice skating, 8.7%. (2-026)

The activity which has the largest number of interested nonparticipants relative to the number of current participants is snow skiing where the number of interested nonparticipants is almost twice the number of current participants, 194.8%. For horseback riding there are approximately 1.5 times as many interested nonparticipants as there are current participants, 145.1%. For all other activities the interested nonparticipant populations are smaller than the current participating populations. The activities in this group with the highest percentages of interested nonparticipants relative to the population currently participating are off-road motorcycling or riding snowmobiles, 76.8%; camping, 53.3%; tennis, 47.8%; boating, canoeing or waterskiing, 43.9%; ice skating, 40.9%; hunting or sport shooting, 39.6%; and street hockey, 37.8%. These activities are followed by fishing, 28.6%; golf or miniature golf, 25.9%; basketball, 19.5%; football, 19.4%; hiking or nature walks, 17.7%; bicycling, 13.7%; baseball or softball, 11.8%; swimming, 4.6%; picnicking, 4.5%; and sightseeing or driving for pleasure, 3.5%. (2-026)

The age pattern of interest varies substantially by activity. The activities for which the interest expressed is greatest in the 5 to 9 age group are fishing, with 15.8% of 5 to 9 year olds being interested nonparticipants; golf or miniature golf, 13.8%; basketball, 10.8%; baseball or softball, 8.3%; football, 7.9%; and street hockey, 4.5%. The activities for which the interest expressed is greatest in the 10 to 19 year age group are picnicking, with 5.0% of 10 to 19 year olds being interested nonparticipants; boating, canoeing or waterskiing, 19.8%; hunting or sport shooting, 11.3%; horseback riding,

30.0%; hiking or nature walks, 10.4%; off-road motorcycling or riding snowmobiles, 20.1%; and sightseeing or driving for pleasure, 3.6%. For five activities the percentage interest was largest in the 20 to 29 years age group. These activities are swimming, with 3.8% of 20 to 29 year olds being interested nonparticipants; tennis, 16.9%; bicycling, 12.6%; camping, 21.2%; and snow skiing, 16.9%. (2-026)

The numbers of interested nonparticipants vary by sex. For eight activities greater percentages of females than males are interested nonparticipants. These activities are picnicking, tennis, golf or miniature golf, baseball or softball, bicycling, horseback riding, hiking or nature walks, sightseeing or driving for pleasure, and ice skating. (2-026)

The numbers of interested nonparticipants vary dramatically by income group, generally in an activity pattern similar to that for participation itself. (2-026)

The numbers of interested nonparticipants are far more equal between the 2 race groups than are the numbers of participants. For 12 of the 19 activities, nonwhites show larger percentages of interested nonparticipants than do whites. These activities are swimming, with 3.7% of all individuals being interested nonparticipants for nonwhites vs. 3.1% for whites; boating, canoeing or waterskiing, 15.3% vs. 13.4%; fishing, 15.6% vs. 8.8%; tennis, 11.9% vs. 11.5%; golf or miniature golf, 7.9% vs. 7.5%; football, 5.2% vs. 3.1%; street hockey, 2.0% vs. 1.7%; bicycling, 6.9% vs. 6.6%; horseback riding, 18.3% vs. 16.0%; hiking or nature walks, 7.4% vs. 7.2%; camping, 20.7% vs. 13.7%; and sightseeing or driving for pleasure, 4.9% vs. 2.4%. Clearly, the limited actual participation of nonwhites relative to whites is not due to limited interest on the part of the nonwhite population, but rather to limited access to recreation or limited income. (2-028)

New activities planned for the coming year

Respondents were asked which, if any, among the activities they did not participate in in the past year they definitely plan to do in the coming year. The numerically most important activities were camping, with 3.3% of all individuals being nonparticipants who definitely plan to participate in the coming year; horseback riding, 2.2%;

tennis, 2.0%; boating, canoeing or waterskiing, 1.9%; snow skiing, 1.7%; ice skating, 1.4%; fishing, 1.4%; hunting or sport shooting, 1.2%; and off-road motorcycling or snowmobiling, 1.0%. The figures may be taken as indices of future growth in the number of at least once-a-year participants. (2-126)

There are strong variations by education in the activities in which individuals did not participate in the previous year but in which they definitely plan to participate in the coming year. Among all activities, college graduates show a greater-than-average propensity to be planning to take up snow skiing; horseback riding; camping; boating, canoeing or waterskiing; fishing; and ice skating. (2-127)

Individuals 20 or more years old who have had some college most frequently plan to take up camping; fishing; tennis; snow skiing; boating, canoeing or waterskiing; horseback riding; bicycling; golf or miniature golf; off-road motorcycling or riding snowmobiles; picnicking; swimming; and sightseeing or driving for pleasure. (2-127)

For individuals 20 or more years old with just 12 years of schooling the only activity for which a larger fraction definitely plan to participate in new activities than for the survey as a whole is bicycling. Among the group with 9 to 11 years of schooling an above-average propensity to participate appears for camping, tennis, and picnicking. (2-127)

Among respondents 20 years of age or older with no more than 8 years of schooling the only activity for which there is a higher-than-average rate of planned participation is swimming. Clearly, the more highly educated subjects show a far greater propensity to expand their recreational horizons than do poorer educated individuals. (2-127)

Individuals in larger households are far more inclined to plan to participate in additional activities in the coming year than are individuals in smaller households. The activities for which individuals in households with 5 or more persons show an above-average planned participation among current nonparticipants are camping; horseback riding; boating, canoeing or waterskiing; tennis; hunting or sport shooting; fishing; golf or miniature golf; swimming; bicycling; basketball; and football. (2-127)

In three or four person households the activities for which there is above-average planned participation among current nonparticipants are ice skating; snow skiing; tennis; off-road motorcycling or riding snowmobiles; bicycling; hiking or nature walks; and baseball or softball. (2-127)

In one or two person households there are no activities for which there is an above-average percentage of currently nonparticipating individuals who definitely plan to participate. For most activities, current nonparticipants in car-owning households show a much greater propensity to plan to participate in the coming year than do nonparticipants in noncar-owning households. For the latter group the only activities where larger-than-average participation percentages appear are golf or miniature golf; sightseeing or driving for pleasure; hiking or nature walks; swimming; and picnicking. (2-127)

The activities in which current nonparticipants plan to participate in the coming year vary according to age of head of household. Households with heads in the 45 to 64 age bracket show a greater propensity to participate in new activities than do households with either younger or older heads. Individuals in these households include, for 14 of the 19 surveyed activities, percentages of current nonparticipants who plan to participate that are greater than for all respondents. These 14 activities are camping; horseback riding; boating, canoeing or waterskiing; snow skiing; hunting or sport shooting; bicycling; golf or miniature golf; off-road motorcycling or riding snowmobiles; hiking or nature walks; football; sightseeing or driving for pleasure; and street hockey. (2-128)

The next most active group in terms of the number of new activities showing above-average planned participation percentages are individuals in households whose heads are up to 29 years of age. Eleven of the activities show above-average planned participation rates for this group, namely camping; ice skating; snow skiing; horseback riding; bicycling; fishing; off-road motorcycling or riding snowmobiles; baseball or softball; hiking or nature walks; basketball; and football. (2-128)

Among individuals in households whose heads are 30 to 44 years of age, the activities with higher-than-average planned participation rates are camping; tennis; horseback riding; boating, canoeing or waterskiing; fishing; golf or miniature golf; basketball;

and baseball or softball. In the 65 and over age category the only activity with a planned participation rate higher than the survey average is sightseeing and pleasure driving. (2-128)

The number of new activities planned for the coming year has a strong positive correlation with the education of the head of the household. Among individuals in households with heads having up to 8 years of schooling, only 4 activities have planned participation percentages in excess of the survey averages. This number rises to 6 in the 9 to 11 years of schooling category, to 8 in the 12 years of schooling category, and to 15 for individuals in households where the head has had at least some college. In the up to 8 years of schooling households, the activities showing above-average percentages are golf or miniature golf; swimming; sightseeing or driving for pleasure; and hiking or nature walks. In the 9 to 11 years of schooling category, the corresponding activities are camping; tennis; off-road motorcycling or riding snowmobiles; golf or miniature golf; and sightseeing or driving for pleasure. Among individuals in households whose head has just 12 years of schooling, the major planned activities are camping; boating, canoeing or waterskiing; snow skiing; hunting or sport shooting; ice skating; football; basketball; and baseball or softball. (2-128)

In the some college category, the activities with above-average planned participation rates are camping; boating, canoeing or waterskiing; fishing; horseback riding; snow skiing; tennis; ice skating; golf or miniature golf; picnicking; sightseeing or driving for pleasure; and football. (2-128)

Nonwhites plan to participate in fewer new activities than do whites. The activities for which the planned participation percentages for nonwhites are above the survey average are camping; boating, canoeing or waterskiing; tennis; golf or miniature golf; hiking or nature walks; swimming; and picnicking. (2-128)

Factors preventing participation in recreation

Respondents who had not participated in an activity in the past year were asked if they were at all interested in participating. If they said they were, they were asked what had prevented them from participating. Across all the activities, at least 80% of

the responses were among the following: no time, too busy, have other activities or responsibilities; no facility available nearby, nearby facilities too crowded; no particular reason, don't know, no opportunity, too lazy; no equipment, no access to equipment, no license; and alone, no one to do it with, no teams or groups available. For purposes of comparison, we list for each activity the principal reasons which account for at least 80% of the responses given by interested nonparticipants in the activity.

The main factors preventing the participation of interested nonswimmers are: no time, too busy, have other activities or responsibilities, 31.7% of interested nonswimmers; disability, illness, too old, out of shape, pregnant, 17.0%; no facilities available nearby, nearby facilities too crowded, 15.9%; and don't know how, afraid, just starting, 15.5%.

The principal reasons given for nonparticipation in picnicking among interested nonpicnickers are: no time, too busy, have other activities or responsibilities, 50.9%; alone, no one to do it with, 17.7%; and no particular reason, no opportunity, 12.9%.

The principal reasons given for nonparticipation in boating are: no equipment, no access to equipment, 31.0%; no time, too busy, have other activities or responsibilities, 28.9%; no facility available nearby, nearby facilities too crowded, 17.7%; and no particular reason, 10.8%.

The principal factors preventing fishing among persons interested are: no time, too busy, have other responsibilities, 42.7%; no facility available nearby, nearby facilities too crowded, 12.8%; no particular reason, 12.6%; and no equipment, no access to equipment, no license, 7.7%.

The principal factors preventing interested persons from hunting are: no time, too busy, 34.3%; parent won't permit it, subject too young to go alone, 17.7%; no equipment, no access to equipment, no license, 13.8%; no particular reason, 11.7%; and no facility available nearby, nearby facilities too crowded, 8.9%.

The principal factors preventing interested nonparticipants from participating in tennis are: no time, too busy, 36.8%; no facility available nearby, nearby facilities too

crowded, 25.9%; no particular reason, 12.0%; and don't know how, afraid, just starting, 10.4%.

The principal factors preventing participation in golf are: no time, too busy, 41.4%; no particular reason, 18.6%; no facility available nearby, nearby facilities too crowded, 17.3%; too expensive, 7.6%.

The principal reasons preventing interested persons from playing basketball are: no time, too busy, 40.4%; no facility available nearby, nearby facilities too crowded, 22.6%; parents won't permit, subject too young to go alone, 16.2%; and no particular reason, 10.2%.

The principal factors preventing participation in baseball are: no time, too busy, 42.8%; no one to do it with, 18.9%; no particular reason, 11.6%; parents won't permit, 9.4%.

The principal factors preventing participation in football are: no time, too busy, 34.2%; no one to do it with, 16.4%; parents won't permit, subject too young to go alone, 16.4%; no particular reason, 13.4%.

The principal reasons preventing participation in street hockey are: no time, too busy, 21.1%; no one to do it with, 18.0%; no facility available nearby, nearby facilities too crowded, 15.5%; no particular reason, 29.2%.

For bicycling, the principal factors preventing participation are: no equipment, no access to equipment, 38.8%; no time, too busy, 35.8%; and no facility available nearby, nearby facilities too crowded, 13.8%.

The principal reasons preventing persons interested in horseback riding from participating are: no facility available nearby, 32.7%; no equipment or access to equipment, 15.3%; no time, too busy, 21.0%; too expensive, 12.9%.

The principal reasons given by persons interested in hiking or nature walks for not participating are: no time, too busy, 48.0%; no particular reason, 24.2%; and no facility available nearby, 14.4%.

The principal reasons given by persons interested in camping for not participating are: no time, too busy, 38.2%; no particular reason, 21.0%; no one to do it with, 16.2%; and no equipment, no access to equipment, 14.4%.

The principal factors preventing participation by persons interested in off-road motorcycling or riding snowmobiles are: no equipment, no access to equipment, 47.8%; no facility available nearby, nearby facilities too crowded, 17.4%; no time, too busy, 13.9%; and no snow, 7.5%.

The principal reasons given by persons interested in sightseeing or pleasure driving for nonparticipation are: no time, too busy, 34.0%; no car, no transportation, 24.4%; too expensive, 16.7%; and no particular reason, 15.3%.

The main reasons given for not snow skiing are: no time, too busy, 24.7%; no facility available nearby, nearby facilities too crowded, 21.9%; no particular reason, 16.2%; too expensive, 16.0%; and don't know how, afraid, just starting, 12.8%.

The reasons preventing ice skating are: no time, too busy, 27.4%; no facility available nearby, nearby facilities too crowded, 25.9%; no particular reason, 14.2%; weather not cold enough, 13.2%.

The factors limiting participation in each activity have been examined in terms of the reasons given for each activity sufficient to account for a response total of at least 80%. A further understanding of the factors preventing recreation participation may be obtained by listing for each factor the particular activities for which the reason or factor has a greater-than-average importance.

As would be expected, no equipment, no access to equipment, or no license has above-average importance for off-road motorcycling or riding snowmobiles, 47.8%; bicycling, 38.8%; boating, 31.0%; horseback riding, 15.3%; camping, 14.4%; and hunting, 13.8%. It is interesting to note that this reason is roughly twice as important for hunting as for fishing, where it was given by only 7.7% of nonparticipants.

No facility available nearby, nearby facilities too crowded, assumes above-average importance for horseback riding, 32.7%; tennis, 25.9%; ice skating, 25.9%;

basketball, 22.6%; snow skiing, 21.9%; boating, 17.7%; off-road motorcycling or riding snowmobiles, 17.4%; golf, 17.3%; and swimming, 15.9%.

No time, too busy, have other activities or responsibilities has above-average importance as an inhibiting factor for picnicking, 50.9%; hiking, 48.0%; baseball, 42.8%; fishing, 42.7%; golf, 41.4%; basketball, 40.4%; camping, 38.2%; bicycling, 35.8%; hunting, 34.3%; and football, 34.2%.

The activities most limited by the respondent's being alone, having no one to do it with, no teams or groups available are: baseball, 18.9%; street hockey, 18.0%; picnicking, 17.7%; football, 16.4%; and camping, 16.2%.

The absence of a car or transportation or no one to take the subject has above-average importance for sightseeing or pleasure driving, 24.4%; fishing, 8.3%; boating, 3.4%; and swimming, 3.3%.

Disability, illness, too old, out of shape, pregnant, has greatest importance in impeding activity for swimming, 17.0%; football, 8.6%; tennis, 7.3%; bicycling, 6.7%; baseball, 6.0%; and basketball, 5.9%.

Don't know how, afraid, just starting, assumes above-average importance in preventing swimming, 15.5%; snow skiing, 12.8%; tennis, 10.4%; hunting, 5.5%; and ice skating, 4.4%. Note that these are activities where professional instruction is frequently received by a new participant.

The fact that the parents won't permit the subject or that he is too young to go alone has above-average importance in preventing participation in hunting, 17.7%; football, 16.4%; basketball, 16.2%; street hockey, 10.6%; baseball, 9.4%; and off-road motorcycling or riding snowmobiles, 7.5%.

That the activity is too expensive figures most importantly in sightseeing or pleasure driving, 16.7%; snow skiing, 16.0%; horseback riding, 12.9%; golf, 7.6%; off-road motorcycling or riding snowmobiles, 7.0%; boating, 5.3%; and camping, 4.8%.

Naturally, the weather not being cold enough or no snow has above-average importance for ice skating, 13.2%; off-road motorcycling or riding snowmobiles, 7.5%;

and snow skiing, 5.8%.

The no particular reason, don't know, no opportunity, too lazy, response occurs with greater-than-average frequency for street hockey, 29.2%; hiking, 24.2%; golf, 18.6%; camping, 21.0%; snow skiing, 16.2%; and sightseeing or pleasure driving, 15.3%.

Table 5.1.--RECREATION PARTICIPATION GROWTH INDICATORS: FIRST TIME PARTICIPANTS, INTERESTED NON-PARTICIPANTS, AND THOSE WITH DEFINITE PLANS TO PARTICIPATE IN COMING YEAR

	Individuals 5 and older participating in past year	Participated first time during year			Non-participants					
					Interested in activity			Definitely plan to do next year		
	No.	No.	% of individuals	% of participants	No.	% of individuals	% of participants	No.	% of individuals	% of participants
Total	50,060	1,691	19.57	3.38	12,135	140.45	24.24	1,343	21.33	3.68
Swimming	5,764	30	0.35	0.52	267	3.09	4.63	63	0.73	1.09
Picnicking	6,096	17	0.20	0.28	272	3.15	4.46	32	0.37	0.52
Boating, canoeing, or waterskiing	2,649	223	2.58	8.42	1,163	13.46	43.90	160	1.85	6.04
Fishing	2,759	88	1.02	3.19	789	9.13	28.60	120	1.39	4.35
Hunting or sport-shooting	1,210	52	0.60	4.30	479	5.54	39.59	103	1.19	8.51
Tennis	2,077	211	2.44	10.16	993	11.49	47.81	169	1.96	8.14
Golf or miniature golf	2,506	86	1.00	3.43	648	7.50	25.86	91	1.05	3.63
Basketball	1,915	32	0.37	1.67	373	4.32	19.48	26	0.30	1.36
Baseball or softball .	2,797	48	0.56	1.72	329	3.81	11.76	25	0.29	0.89
Football	1,422	23	0.27	1.62	276	3.19	19.41	27	0.31	1.90
Street hockey	399	76	0.88	19.05	151	1.75	37.84	7	0.08	1.75
Bicycling	4,140	80	0.93	1.93	569	6.59	13.74	96	1.11	2.32
Horseback riding	960	91	1.05	9.48	1,393	16.12	145.10	187	2.16	19.48
Hiking or nature walks	3,530	35	0.41	0.99	626	7.25	17.73	54	0.63	1.53
Camping	2,275	169	1.96	7.43	1,212	14.03	53.27	288	3.33	12.66
Off-road motorcycling or snowmobiling	1,039	180	2.08	17.32	798	9.24	76.80	83	0.96	7.99
Sightseeing or driving for pleasure	6,262	14	0.16	0.22	217	2.51	3.47	40	0.46	0.64
Snow skiing	426	92	1.06	21.60	830	9.61	194.84	151	1.75	35.45
Ice skating	1,834	144	1.67	7.85	750	8.68	40.89	121	1.40	6.60

Table 5.2.--WHAT PREVENTED SUBJECT FROM PARTICIPATING IN ACTIVITIES IN WHICH HE IS INTERESTED

(Percent of non-participants)

Reason	Swimming	Picnicing	Boating	Fishing	Hunting	Tennis	Golf	Basketball	Baseball	Football
No equipment/no access to equipment/no license			31.0	7.7	13.8	3.8	1.4	1.6	2.5	1.9
No facilities available nearby/nearest facility too crowded	15.9	7.4	17.7	12.8	8.9	25.9	17.3	22.6	9.4	7.4
No time/too busy/have other activities or responsibilities	31.7	50.9	28.9	42.7	34.3	36.8	41.4	40.4	42.0	34.2
Alone/no one to do it with/ no teams or groups available	0.7	17.7	4.4	7.0	5.3	3.5	5.0	6.5	18.9	16.4
No car/no transportation/ no one to take subject	3.3	7.0	3.4	3.3	2.8	1.3	2.0	0.5		
Disability/illness/too old/ out of shape/pregnant	17.0	4.4	1.9	2.2	1.9	7.3	3.1	5.9	6.0	8.6
Don't know how/afraid/ just starting	15.5	1.1	1.9	2.7	5.5	10.4	3.5		3.1	0.4
Parents won't permit/ subject too young to go alone	1.8	2.2	6.0	5.9	17.7	5.8	4.6	16.2	9.4	16.4
Too expensive--equipment, fees, travel costs, gas, etc.	3.0	1.1	5.3	2.7	1.7	1.8	7.6			
Weather not suitable/not cold enough/no snow			0.3				0.6		0.9	
No particular reason/don't know/no opportunity/ too lazy	11.8	12.9	10.8	12.6	11.7	12.0	18.6	10.2	11.6	13.4
Other	0.7	0.7		0.7	0.9	0.4	0.3			1.5

Table 5.2.--WHAT PREVENTED SUBJECT FROM PARTICIPATING IN ACTIVITIES IN WHICH HE IS INTERESTED (Continued)

(Percent of non-participants)

Reason	Street hockey	Bicycling	Horseriding	Hiking	Camping	Mcycl-snowmo.	Pleasure dr.,S.S.	Snow skiing	Ice skating
No equipment/no access to equipment/no license	1.9	38.8	15.3	0.5	14.4	47.8		7.7	7.0
No facilities available nearby/nearest facility too crowded	15.5	13.8	32.7	14.4	6.8	17.4	3.3	21.9	25.9
No time/too busy/have other activities or responsibilities	21.1	35.8	21.0	48.0	38.2	13.9	34.0	24.7	27.4
Alone/no one to do it with/ no teams or groups available	18.0	0.4	4.2	6.0	16.2	0.5	4.3	3.8	3.6
No car/no transportation/ no one to take subject ...		0.5	1.2	0.2	1.9	0.6	24.4	0.1	
Disability/illness/too old/out of shape/ pregnant	3.1	6.7	3.3	2.9	1.5	0.6	2.4	2.2	4.5
Don't know how/afraid/ just starting	0.6	2.8	3.5	0.7	2.2	3.7	1.4	12.8	4.4
Parents won't permit/ subject too young to go alone	10.6	1.0	3.6	5.7	3.3	7.5	0.5	3.2	4.9
Too expensive--equipment, fees, travel costs, gas, etc.		2.7	12.9	2.9	4.8	7.0	16.7	16.0	2.0
Weather not suitable/ not cold enough/no snow ..		0.2			0.5	7.5		5.8	13.2
No particular reason/ don't know/no opportunity/too lazy	29.2	6.2	14.3	24.2	21.0	6.8	15.3	16.2	14.2
Other			0.1				1.0		0.8

Chapter 6.--ANNUAL ACTIVITY DAYS

For each of the 19 survey activities in which the respondent had participated during the past year, he was asked to estimate the number of different days on which he had participated in the activity during that year.

Prior to the activity-day questioning, the respondent had been asked which of the 19 survey activities he had participated in on the most recent good-weather Sunday and whether his participation had been in Pennsylvania. The respondent had also been asked which activities he had participated in during the past year, which activities he had participated in for the first time in the past year, which activities not participated in were of interest to him and what had prevented him from participating, and which activities not participated in during the past year did he definitely plan to try in the coming year.

Thus, by the time the interview reached the activity-day questioning, a general picture of the respondent's recreation participation had already been outlined. Having the benefit of this general picture the interviewer was able to engage in a dialogue with the respondent to help him estimate for each activity the number of different days on which he had participated in the activity during the past year and the number of days in Pennsylvania. Interviewers were instructed to judge the reasonableness of estimates given and to help the respondent arrive at the best possible estimates. Many respondents tended to over-estimate because they failed to consider bad weather, illness, special occasions and other circumstances which might interrupt their normal routine. Interviewers were trained to be alert for such over-estimates and to remind respondents to consider bad weather, etc.

Many respondents were unable to give a number outright, particularly if their recreation participation had been extensive. Such respondents were asked to describe the

general pattern of their participation--for example, how many times a week they had participated, whether it had been during the summer months only, and so on. The interviewer then suggested a figure to the respondent based upon the description given and allowing for rainy days, etc. The respondent was asked whether the estimate sounded too high or too low. One or more adjustments in the estimate were made as needed.

For four activities--swimming, tennis, basketball, and ice skating--estimates were also obtained for the number of different days on which the activity had occurred indoors.

Table 6.1 shows the arithmetic mean and median days per year for each of the 19 survey activities. The means are presented on two bases, per participant in the activity and per individual 5 years of age and older in the population. It may be noted that the ratio of the per capita mean to the mean per participant is identical to the fraction of persons participating at least once during the year. The medians presented are the median number of activity days for participants in the activity. The means are presented so that activity day totals may be estimated for different size populations. The medians are presented to show typical participation among persons participating in the activity. The total of per capita activity days across all activities is 131.26, which is approximately 36% of the number of days in a year. In this connection it should be recalled that an activity is counted for a day if it was engaged in at all during the day, no matter for how short a time, and that an individual can engage in many activities in the same day and a full activity day would be counted for each activity. Picnicking and bicycling, for example, very frequently would be combined with other activities. Recall that upon the most recent good weather summer Sunday the average number of activities participated in for all surveyed individuals was 1.83. If the total of per capita activity days of 131.26 is divided by 1.83 we obtain approximately 72 days, which is probably a better estimate of the number of different days during the year on which one or more of the 19 surveyed activities were engaged in. This figure of 72 days is less than 2 days per week and is also less than the number of summer days.

The median number of days per participant is always well below the mean number

of days because of the heavy effect on the mean of the few participants with the heaviest participation. The discussion in the chapter will be largely in terms of median activity days per participant.

The activities with the largest median number of days, 12 or more, of participation in the past year are bicycling, 32.2; swimming, 20.5; basketball, 18.2; sightseeing or driving for pleasure, 13.9; baseball or softball, 13.8; street hockey, 13.7; and football, 12.0.

Activities for which the median is a higher-than-average fraction of the mean, for example, swimming, picnicking, hunting or sport shooting, sightseeing or driving for pleasure, and ice skating are activities which have more equal participation among participants in terms of number of days. The activities just listed all have a ratio of the median to the mean of at least 60%. The three activities with the greatest inequality of participation among participants are horseback riding, golf or miniature golf, and off-road motorcycling or riding snowmobiles, all with ratios of the median to the mean of below 40%.

Swimming activity days

Among all individuals who participated in swimming in the past year the median number of different days on which the individual engaged in swimming is 20.5. The median number of days is negatively correlated with the age of the participant: it is 36.1 for participants 5 to 9 years of age, and 32.2 for participants 10 to 19 years of age. Beyond the age of 19 the median holds reasonably steady for age groups below 65 at approximately 14 to 16 days. In the 65 and over category it falls to 10.1 days. (2-131)

Female swimmers have a slightly higher median participation than do males, 21.4 vs. 19.7. (2-131)

With regard to income, the lowest swimming median is in the $7,000 - $9,999 income category, 14.3 days. It is slightly larger in the $4,000 - $6,999 category, 14.8 days, and increases still further to 16.4 days for the under $4,000 category. At the other end of the income distribution the median increases with increasing income,

21.4 in the $10,000 - $14,999 category and 26.6 in the $15,000 and over category. (2-131)

Swimming participants not in the labor force have a strikingly larger median number of swimming days, 26.4, than do the employed, 16.1, or the unemployed, 11.4. The larger median for those not in the labor force is due to the concentration in this group of persons under 20 years of age, who have a much higher median number of swimming days. (2-132)

Participants 20 or more years of age with some college education have a higher median number of swimming days, 24.5, as do college graduates, 17.6, than do participants in the lower schooling categories where the medians range from 10.4 to 13.1 days. (2-132)

The median number of swimming days has a strong positive correlation with the size of household since larger households tend to have more children. The median ranges from 13.4 for participants in 1 or 2 person households, to 19.7 for 3 or 4 person households, to 25.1 for households with 5 or more persons. (2-132)

Swimming participants in car-owning households show higher median swimming days, 20.5, than do participants in households without a car, 14.1. (2-132)

The median number of swimming days per participant is a function of the age of the head of the household, reflecting the probability of the presence of children 5 or more years old in the household. The largest median, 24.6, is for participants in households whose head is 30 to 44 years of age. In younger households, where the children present are likely to be under 5 years of age, the median falls to 15.3. In the 45 - 64 age category it is 18.6, and it falls to 14.1 in the 65 and over category. (2-133)

Swimming participants in households where the head of the household is employed have a higher median, 20.6, than do those with the head of the household unemployed, 16.2, or not in the labor force, 17.7. (2-133) White participants have a strikingly higher median number of swimming days, 20.7, than do nonwhites, 12.7. (2-133)

The median number of swimming days per participant is relatively invariant with respect to population density: 19.2 for under 1,000 persons per square mile, 20.6

for 1,000 - 5,999, and 20.9 for 6,000 and over. These categories will hereafter be referred to as low, medium, and high density. The uniform planning regions having a higher-than-average median number of swimming days per participant are regions one, three, four, six, and eight. The highest medians are in regions four, 27.5; and six, 24.9. The lowest are in regions seven, 11.7; and five, 13.9. (2-278)

Note that population density and region are for the place where the participant resides, not for the place where the participation occurs.

Indoor swimming activity days

27.1% of swimming participants swam indoors at least once in the past year. For whose who did swim indoors, the median number of days indoors was 7.6. The percentage of swimmers who did swim indoors tends to be inversely related to age and has a peak in the 10 to 19 year age bracket. In the 5 to 9 year age group, 30.2% of swimming participants swam indoors at least once; in the 10 to 19 age group, 37.0%; in the 20 to 29, 25.9%; in the 30 to 44, 22.1%; in the 45 to 64, 18.9%; and in the 65 and over age group 17.0% of swimmers swam indoors at least once in the previous year.

For participants who did swim indoors at least once, the median number of days indoors has a u-shaped distribution with respect to age with peaks of 12.8 for the 5 to 9 year olds and 17.0 for those 65 and over. The minimum, 4.5 is in the 30 - 44 year group. In the 10 to 19 year group the median is 7.2; in the 20 to 29 year group, 8.2; and in the 45 to 64 year group, 7.2. (2-226)

A slightly higher percentage of male participants swam indoors than did females, 28.8 vs. 25.6%, and the median number of indoor days among male indoor participants is slightly higher, 7.8 vs. 7.4 days. The percent of swimmers who swam one or more days indoors is a u-shaped function of total family income, having a maximum of 37.9% in the under $4,000 group, and a maximum of 31.9% in the $15,000 and over group. The minimum percentage, 16.5%, is in the $4,000 to $6,999 group. In the $7,000 to $9,999 group the fraction of participants swimming at least once indoors is 22.4%, and in the $10,000 to $14,999 class it is 26.3%. (2-226)

The median number of indoor days per indoor participant peaks in the $4,000 - $6,999 group, 9.8, and in the $15,000 and over group, 7.9. The smallest medians are in the under $4,000 group, 4.5, and in the $7,000 to $9,999 category, 5.9. The median rises to 7.3 in the $10,000 - $14,999 group. (2-226)

The percentage of swimmers who swam at least one day indoors is relatively unresponsive to the employment status of the participant. Indoor participants who are employed and those not in the labor force have higher median indoor days, 7.4 and 8.0, respectively, than do unemployed participants, 4.2. (2-227)

The percent of swimmers 20 or more years of age who swam at least once indoors increases with increasing education. Among swimmers 20 or more years of age who had less than 11 years of schooling, 13.4% swam at least once indoors in the previous year. This percentage rises to 17.2% for those with 12 years of schooling to 26.1% for those with some college, and to 36.2% for swimmers who are college graduates. With the exception of the less than 9 years of schooling category, where the median is 14.5, the median number of indoor days per indoor participant rises with rising education. In the 9 to 11 year group the median is 2.7 days, in the 12 year group, 4.1, in the some college group, 8.3, and in the college graduate group, 8.4. (2-227)

The percentage of swimmers who swam indoors at least once increases with the size of the participant's household since participants in larger households are more likely than those in smaller households to be young children and teen agers, who swim at schools, recreation centers and the like. Of swimmers in 1 or 2 person households, 23.4% swam at least one day indoors. For 3 to 4 person households the fraction rises to 25.0%, and for households with 5 or more persons it rises still further to 30.4%. The median number of indoor days per indoor participant is, however, not responsive to the size of household, being 7.7 for 1 or 2 person households, 7.0 for 3 or 4, and 8.1 for 5 or more. (2-227)

The percentage of swimmers who swam indoors at least once is dramatically higher for swimmers in noncar-owning households than in car-owning households, 45.0% vs. 26.8%. This fact is consistent with the finding that the percentage is highest among

the lowest income participants. Similarly, as will be stated below, the percentage is considerably higher for nonwhite participants than for whites. It would appear, therefore, that economically disadvantaged participants, who have limited access to a variety of swimming facilities, are more likely to make use of indoor facilities at schools, recreation centers, etc. than are those who have the opportunity to swim elsewhere. The median number of indoor days per indoor participant is somewhat unresponsive to car ownership, being 7.0 for swimmers in noncar-owning households and 7.6 for swimmers in car-owning households. (2-227)

The percentage of swimmers who swam indoors at least once varies according to the ag of the head of the household, peaking somewhat in the 30 to 44 age group, 27.4%, and falling off dramatically in the 65 and older group, 12.4%. Below 30 the percentage is 21.9%, and in the 45 to 64 age group it is 23.6%. With the exception of the 65 and older group, the median number of indoor days per indoor participant decreases with increasing age of the head of the household. Under 30 the median is 8.0; 30 to 44, 7.6; and 45 to 64, 7.0. In the 65 and older group it rises dramatically to 17.0. The fraction of swimmers who swam indoors at least once is inversely related to the education of the head of the household, except for swimmers from households where the head has had less than 9 years of schooling. In the latter group, 20.2% of swimmers swam indoors at least once, in the 9 to 11 years of schooling group, 15.5% did so; 12 years, 21.3%; and where the head had at least some college, 33.3%. Up to 12 years of schooling the median number of indoor days per indoor participant decreases with increasing education. For swimmers from households where the head has had less than 9 years of schooling the median is 11.6, compared to 9.1 for 9 to 11 years of schooling, and 6.6 for 12 years of schooling. The median then rises slightly for households where the head has had at least some college. (2-228)

The percentage of swimmers who swam indoors at least once is greater where the head of the household is employed, than where he is unemployed, or not in the labor force, 25.2%, 21.8%, and 20.6%, respectively. Similarly, the median number of indoor days per indoor participant is greater where the head is employed, 7.9, than

where he is unemployed, 3.7, or not in the labor force, 4.8. (2-228)

The percentage of swimmers who swam indoors at least once is very strongly a function of race, probably because of the limited swimming opportunities for nonwhites. Among white swimmers, 24.2% swam indoors at least once compared to 45.7% of nonwhites. The median number of indoor days for white indoor participants, 7.5, is lower than for nonwhites, 9.7. (2-228)

Both the fraction of people who swam indoors at least once and the median number of indoor swimming days for indoor participants increase with increasing population density. In the low density places, 18.1% swam indoors at least once; in the medium density places, 28.1%; and in the high density places, 30.3%. The median number of indoor swimming days per indoor participant are, in the low, 3.7; medium, 6.4; and high, 10.3. (2-297)

The regions having a fraction of swimmers who swam indoors which is higher than the statewide average of 27.1% are regions one, 28.6%; eight, 27.7%; nine, 27.9%; and ten, 32.0%. The two regions with the lowest fractions of swimmers who swam indoors at least once are regions four, 16.7% and seven, 19.6%. (2-297)

Picnicking activity days

The median number of days on which picnicking occurred among individuals who picnicked at least once in the past year is 6.3. Picnicking frequency is greatest among participants in the 5 to 9 year age category where the median number of days is 8.6, and in the 30 - 44 category where the median is 7.3. The median is distinctly lower among participants in the 10 - 19 year age grouping, 4.8, and in the 65 and over category, where it is 4.0. The median among female picnicking participants is slightly higher than among male participants, 6.8 vs. 5.5 median days. Picnickers in the higher income families picnic a larger number of days per year than those in the lower income families. The medians range from 4.2 for picnickers in the under $4,000 family income category to 6.8 for picnickers in the $15,000 and over category. (2-136)

Unemployed picnickers picnic fewer days per year, 4.4, than do employed

picnickers, 6.2. The median number of days is greatest among picnickers not in the labor force since this group includes the greatest concentration of children. (2-137)

The median number of picnicking days per participant is directly related to the education of the participant. Among participants 28 or more years of age with less than 9 years of schooling the median number of days is 4.7, compared to 5.2 for participants with 9 to 11 years of schooling, 6.4 for those with 12 years of schooling, 6.6 for those with some college, and 7.0 for college graduates. (2-137)

Picnicking participants in one and two person households picnic a fewer number of days, 4.9, compared to participants in larger households. The median number of days for 3 or 4 person households is approximately equal to the median for 5 and over households, 6.6 and 6.5, respectively.

Participants in car-owning households have a much larger median number of days, 6.4, than do participants in noncar-owning households, 3.9. (2-137)

Median number of days per picnicking participant is slightly responsive to the age of the head of the household, reaching a maximum of 7.5 where the head of the household is 30 to 44 years of age. It is slightly lower for picnickers in households where the head is under 30 years of age, 7.0, and still lower in the 45 to 64 and 65 and over categories, 5.0 and 4.2, respectively. (2-138)

The median number of days per picnicking participant is higher in households where the head has had at least some college, 6.8, compared to 6.3 for all picnicking participants. (2-138)

Where the head of the participant's household is not in the labor force the median number of days, 4.7, is below that where he is employed, 6.4, or unemployed, 7.3. (2-138)

White picnickers have a higher median number of days, 6.4, than nonwhite, 4.4. (2-138)

There is very little variation by population density or by region in the median

number of picnicking days per participant. The regions with medians higher than the statewide median of 6.3 are regions two, three, four, five, seven, eight, and nine. The regions with the two lowest medians are region one, including Philadelphia, 5.1; and region ten, including Pittsburgh, 5.7, perhaps indicating a deficiency in picnicking facilities in these cities. The regions with the highest medians are region eight, 7.7; and regions four and nine, each with 7.6. (2-279)

Activity days in boating, canoeing or waterskiing

The median number of activity days for individuals who engaged in boating, canoeing or waterskiing is 3.5. The median number of days per participant increases with increasing age of the participant over 30: 4.3 in the 30 - 44 category, 5.5 in the 45 - 64 category and 7.7 in the 65 and over category. For participants under 30 the median number of days decreases with increasing age: 3.6 in the 5 to 9 category, 2.7 in the 10 to 19, and 2.5 in the 20 to 29 year category. (2-141)

Male participants have a slightly higher median number of boating days, 3.8, than do females, 3.3. (2-141)

Family income is a very strong determinant of whether or not an individual participates in boating (see Chapter 4) but has relatively little influence on the median number of boating days per participant. The lowest median, 2.4, is in the under $4,000 family income category. The median peaks in the $7,000 to $9,999 category at 3.5, and again in the $15,000 and over category, 4.1. (2-141)

The median number of boating days per participant is not strongly responsive to the employment or labor force status of the participant. It ranges from 3.2 for participants not in the labor force to 3.8 for employed participants. (2-142)

Among participants 20 years of age or older, those who have had 9 to 11 years of schooling have the highest median number of boating days, 5.0, compared to approximately 3 or 4 days in each of the other education categories. (2-142)

The median number of days per participant is slightly inversely related to size of

household, ranging from 3.9 for boaters in 1 or 2 person households, to 3.4 for those in households with 5 or more individuals. (2-142)

Boating participants in households having a car participate more days, a median of 3.6, compared to those in households without cars, 2.0. (2-142)

Where the head of the household is 65 years of age or older, a boater is likely to participate on twice as many days per year as are boaters in the lower age categories. The median number of days of boating, canoeing or waterskiing for participants in households where the head is 65 or older is 7.9 compared to 3.5 days for all participants. (2-143)

The median number of boating days per participant is not strongly responsive to the education of the head of the participant's household, ranging from 3.3 for high school graduates, to 3.9 for the 9 to 11 years of schooling category. (2-143)

The median number of boating days for white participants, 3.6, is twice that for nonwhites, 1.8. (2-143)

The median number of days of boating, canoeing or waterskiing per participant varies inversely with population density. It is 3.8 for low density places, 3.7 for medium, and 3.1 for high. The regions with higher median days than the statewide median of 3.5 are regions one, three, five, six, eight, and nine. The two highest medians are in regions three, 4.4; and four, 4.2. The two lowest medians are in regions two, 3.4; and ten, 3.3. (2-280)

Fishing activity days

The median number of activity days per participant for fishing is 7.8. Fishing participants 65 or over have a considerably higher median number of days, 13.0. The two age categories 30 to 44 and 45 to 64 each have a median of 8.7 days. The lowest median is among 5 to 9 year olds, 5.7 days. (2-146)

The median for male participants is nearly twice that for females, 9.5 vs. 4.9 days. The median number of fishing days per participant is not very responsive to total

family income. It ranges from 6.7 for participants with family incomes $15,000 and over to 8.9 for participants in families in the $4,000 - $6,999 category. (2-146)

Fishing participants who are unemployed are likely to fish a higher number of days than are those who are employed. The median number of days per participant in the unemployed group is 16.6 compared to 8.6 for those who are employed and 7.0 for those not in the labor force. The last group consists primarily of children and housewives; retired participants are not sufficiently numerous to bring the median of the group above the average for all participants. (2-147)

The median number of fishing days per participant is not very responsive to education of participants 20 or more years old. The some college and college graduates groups have medians of 6.7 and 7.7 days, respectively, compared to 8.3, 8.8, and 8.9 for the up to 8 years, 9 to 11 years, and 12 years groups, respectively. The median number of days per participant decreases slightly with increasing size of household, ranging from 8.6 for 1 to 2 person households, to 7.1 for households 5 and over. (2-147)

Fishing participants in car-owning households have a median participation of 7.8 days compared to 5.5 for participants in noncar-owning households. (2-147)

Just as participants 65 or over have a higher-than-average median number of days per participant, participants in households whose head is 65 or over have a higher-than-average median, 13.1. Participants in households where the head of the household has had less than 9 years of schooling show a strikingly larger median, 11.3, than do those in households in the other education categories. Participants in households where the head of the household is unemployed show a very high median number of days, 15.6. (2-148)

The median number of days for white participants is well over twice that for non-white, 7.9 vs. 3.0 days. (2-148)

The median number of fishing days per participant is higher in lower population density places. It is 8.4 in both the low and medium density places and falls off to 6.1 in the high density places. The medians are subject to large geographical variation.

The regions with medians higher than the statewide median of 7.8 are regions three, four, five, six, seven, eight, and nine. The two highest medians are in regions four, 11.9, and five, 20.0. The two regions with the lowest medians are regions one, 5.9, and two, 5.0. (2-281)

Activity days in hunting or sport shooting

Among hunters and sport shooters the median number of activity days per participant is 10.3. In contrast to fishing, the hunting median is strikingly lower in the 65 and older age category, 7.6. The median number of days per participant reaches a peak of 11.8 in the 20 - 29 year age category and falls off on either side of this category, 10.2 in the 30 - 44 group and 9.3 in the 45 - 64 group. Among participants 10 - 19 years old the median is slightly larger than for all participants, 11.3, and it falls to 5.8 for participants 5 - 9 years of age. (2-151)

The median number of days for male participants is nearly three times that for females, 11.1 compared to 4.0. (2-151)

The median number of hunting days per participant peaks in the middle income categories. It is 8.3 in the under $4,000 family income group, 12.5 in the $10,000 - $14,999 group, and 7.9 in the $15,000 and over group. (2-151)

The median number of activity days for participants who are unemployed, 16.3, is appreciably greater than for those who are employed, 10.3, and for those not in the labor force, 9.4. (2-152)

Participants in the middle education groups show strikingly higher median number of days than those at the bottom or top ends of the education scale. For hunters or sport shooters 20 or more years old with just 12 years of schooling the median number of days is 11.7; for those with 9 to 11 years of schooling it is 11.4. Among hunters or sport shooters with some college it falls to 8.8 and among college graduates to 6.5, which is below the median for individuals with less than 9 years of schooling, 7.5. (2-152)

There is relatively little variation in the median number of days per participant

by size of household. Virtually all hunters or sport shooters are from car-owning households. (2-152)

The highest median number of days per participant according to the age of the head of the participant's household is in the under 30 group, 12.4. In the 65 and over group it falls to 6.5 and in the intervening groups it is approximately equal to the average for all participants. (2-153)

The median activity days for hunters and sport shooters, classified according to the education of the household head, is greatest for those in households where the head has had just 12 years of schooling, 12.5. It is drastically lower, 7.2, in the higher education group as well as for hunters from households where the head has had less than 9 years of schooling, 8.8. (2-153)

The fractions of hunters who come from households where the head is unemployed or nonwhite is negligible, 1.5% and 0.9% respectively. (2-153)

The highest median number of activity days for hunting or sport shooting according to population density is in the medium density places, 11.3. The low density places show a median of 9.8 and the high density places a median of 8.5. The majority of hunters and sport shooters, 51.7%, reside in medium population density places. (2-282)

The regions showing higher medians than the statewide median of 10.3 are regions four, five, six, seven, nine, and ten. The three highest medians are for region four, 19.5; region seven, 13.4; and region nine, 12.2. The regions with the two lowest medians are regions two, 7.0; and three, 7.4. (2-282)

Tennis activity days

The median number of activity days per participant for tennis is 11.4. In the age categories in the 10 to 64 range the median is fairly constant, ranging from 10.1 in the 30 - 44 year group to 13.5 in the 20 - 29 year group. Participants under 10 and 65 or over tend to be occasional tennis players with medians of 4.0 and 2.4, respectively, for the two groups. (2-156)

Unlike most of the other activities, tennis shows a slightly larger median number of days for female participants than for males, 11.9 vs. 11.0. (2-156)

Above the $4,000 level the median number of days per participant is not strongly responsive to family income. Among the relatively few tennis players from households with family incomes under $4,000 the median falls to 3.8 days. (2-156)

Tennis participants who are employed have a strikingly higher median participation than do those who are unemployed, 12.6 vs. 5.6, respectively. Although the median number of days per participant is not strongly responsive to family income it is highly responsive to education, ranging from 8.3 for participants 20 or more years old with 9 to 11 years of schooling to 15.6 for college graduates. (2-157)

Participants in larger households have slightly higher median activity days than do those in smaller households. The number of tennis players from households not having a car is so small that the calculated median number of days is unreliable for this group. (2-157)

The median number of tennis days per participant falls off dramatically to 6.5 for tennis players from households whose heads are 65 or over. The median number of tennis days is somewhat larger for participants from households whose head has had some college, 13.2, than it is for all participants. The number of tennis players among nonwhites is too small to permit computation of a reliable median. (2-158)

Tennis players from places with high population densities show the highest median number of days, 12.9. The lowest median, 10.3, is for the medium density places. Tennis players from the low density places have a median participation of 11.5. The regions having medians higher than the statewide median of 11.4 are regions one, three, five, six, and seven. The two highest medians are in regions three, 14.8; and seven, 14.5. The two lowest medians are in regions four, 9.1; and eight, 9.0. (2-283)

Indoor tennis activity days

Among all tennis players, 20.5% played at least one day indoors in the past year.

Among those who did play indoors, the median number of days indoors is 5.9. The likelihood of a tennis player having played indoors at least once increases beyond the age of 9 years, reaches a peak in the 30 to 44 age group, and then falls off beyond age 45. In the 10 to 19 year age group, 16.8% of tennis players played indoors at least once, in the 20 to 29 group, 19.8%, in the 30 to 44, 25.9%, in the 45 to 64, 22.3%, and in the 65 and over, 18.2%. There is also a peak, 24.1%, in the 5 to 9 year age group. The median number of indoor days per indoor participant increases with increasing age until it reaches a peak in the 20 to 29 year age group after which it falls off. In the 5 to 9 year group the median is 3.5, in the 10 to 19, 5.3, in the 20 to 29, 10.5, in the 30 to 44, 6.4, and in the 45 to 64, 6.3. Insufficient data are available for estimating the median in the 65 and older group. (2-231)

The fraction of female tennis players who played indoors at least once, 20.7%, is slightly greater than that of male tennis players, 20.4%. Females, moreover, show a distinctly higher median number of indoor days per indoor participant, 6.8, than do males, 4.5. (2-231)

The fraction of tennis players who played at least one day indoors is an irregular function of the total family income, peaking in the under $4,000 category, 16.3%, the $7,000 to $9,999 group, 20.3%, and the $15,000 and over, 23.1%. In the $4,000 to $6,999 group, 11.7% of participants played indoors; in the $10,000 to $14,999 group, 17.4%. Up to $15,000 the medians round to 4 or 5 days. In the $15,000 and over category the median jumps to 8.5. (2-231)

Tennis players who are employed are somewhat less likely to have played indoors, 17.7%, than are those who are unemployed, 18.9%, or those not in the labor force, 23.9%. The median number of indoor days per indoor participant for employed persons, 5.2, is slightly greater than for those not in the labor force, 6.3. For tennis players 20 years of age or older the percentage who played indoors at least once is higher for those with at least some college education. For those who have had 12 years of schooling, 15.6% played indoors, compared to 24.8% for those who have had some college and 26.0% for college graduates. The median number of indoor days per indoor participant peaks at

12.2 in the some college category and falls off on either side to 7.8 in the 12 years of schooling group and to 5.3 among college graduates. (2-232)

The fraction of tennis players who played indoors at least once peaks among tennis players from 1 to 2 person households, 22.1%, and those from 5 or more person households, 21.7%. The fraction falls to 18.6% for 3 to 4 person households. The median number of indoor days per indoor participant varies inversely with size of household: 1 or 2, 11.0; 3 or 4, 9.8; and 5 or more, 3.7. (2-232)

The fraction of tennis players who played indoors is greater for participants from car-owning households, 20.5%, than from noncar-owning households, 13.6%. The median indoor days per indoor participant for the latter group, however, 7.0, is greater than for car-owning households, 5.9. (2-232)

The fraction of tennis players who played indoors at least once is a relatively flat function of the age of the head of household, holding level at approximately 21% for participants from households with heads aged 30 and above. For households with the head less than 30 years old, 16.6% of tennis players played indoors, and this group has a distinctly higher median number of indoor days per indoor participant, 13.7, than do the other groups. In the 30 - 44 year household head age group the median is 4.2, in the 45 - 64 group, 6.1, and in the 65 or over group, 3.5. (2-233)

The fraction of tennis players who played indoors at least once increases steadily with increasing education of the head of household. In the less than 9 years of schooling category it is 5.8%, in the 9 to 11 years group, 12.3%, in the 12 years of school group, 21.8%, and it is 22.4% in the at least some college group. The last group has a higher median number of indoor days per indoor participant, 5.8, than do households where the head has had only 12 years of schooling, 4.4. (2-233)

Where the head of the household is employed a tennis player is appreciably more likely to have played indoors, 21.1%, than where the head is not in the labor force, 15.2%, or is unemployed, 7.7%. However, the median number of indoor days per indoor participant among households where the head is not in the labor force is distinctly higher, 24.5,

than it is where the head is employed, 5.7. (2-233)

Nonwhite individuals constitute an almost negligible fraction of tennis players, 1.5%. Among nonwhite tennis players, however, a higher proportion, 40.6%, played indoors than among white, 20.2%. The median number of indoor days per participant for nonwhite, 1.4, is strikingly lower than for white, 6.7. (2-233)

Regions with a fraction of tennis players who played indoors at least once which is higher than the statewide fraction of 20.5% are region one, 23.4%, region six, 23.9%, and region seven, 26.0%. The regions with the lowest fractions are region four, 0.0%, and region eight, 10.9%. (2-298)

Regions with a median number of indoor days per indoor participant which is higher than the statewide median of 5.9 are region one, 7.4; region two, 12.9; and region five. The value for region five, which is exceedingly high due to sampling error, has not been stated. (2-298)

The highest fraction of tennis players who played indoors is in the medium population density areas, 21.5%, compared to 17.7% in the low and 20.6% in the high. The median numbers of indoor days per indoor participant behave in reverse fashion: 3.7 in the medium density areas, 8.3 in the high, and 8.5 in the low. (2-298)

Activity days in golf or miniature golf

Among all individuals who participated in golf or miniature golf in the past year the median number of activity days is 4.5. The median is highly responsive to the age of the participant, ranging from 2.8 for children 5 to 9 to 11.4 for golfers 45 to 64. It falls off slightly to 9.5 for golfers 65 and over. (2-161)

Male golfers participate a strikingly higher number of days than do females. The median for male participants is 6.4 days compared to 3.9 for females. (2-161)

The median number of golfing days per participant increases with increasing family income. It ranges from 3.9 for golfers from families with incomes under $4,000 to 5.8 for participants from families with incomes $15,000 and over. (2-161)

Golfers who are employed have a higher median number of activity days per participant, 7.0, compared to those who are unemployed, 5.1, and those not in the labor force, 3.8. (2-162)

The median number of golfing days per participant is very strongly a function of education, ranging from 2.0 for participants 20 years and older with less than 9 years of schooling to 8.3 for college graduates. (2-162)

The median number of golfing days per participant is inversely related to size of household, ranging from 8.3 for 1 or 2 person households to 4.0 for 5 or more person households. A negligible proportion, 1.5% of golfers are from noncar-owning households. (2-162)

The median number of golfing days per participant is directly related to population density. In the low density places it is 3.8, in the medium density places it is 4.6, and in the high density places, 5.2. There is appreciable variation by region in the median number of days per participant for golf and miniature golf. The regions with medians higher than the statewide median of 4.5 are regions two, three, four, nine, and ten. The two highest medians are in regions nine and ten with 6.4 and 6.0 respectively. The two lowest medians are in regions five, 2.9; and eight, 3.1. (2-284)

Basketball activity days

Next to swimming, basketball has the highest median number of activity days per participant, 18.2. The largest median numbers of days per participant are in the 10 to 19 year age group, 25.7, and in the 5 to 9 year age group, 22.5. In the 20 to 29 year age group the median falls to 12.6 days per participant, it falls further in the 30 to 44 year group to 10.9, and still further in the 45 to 64 group, 6.3. There were no participants in the 65 and older age group. Male basketball players have participated on roughly 2 1/2 times as many days as female, 24.4 vs. 10.6. (2-166)

Median days per participant is much greater for individuals in families with incomes under $7,000 than above. In the under $4,000 income category the median number of days per participant is 54.5 and in the $4,000 - $6,999 category it is 32.5. Above

the $7,000 income level the median number of days remains rather stable, from 16 to 18 days. (2-166)

Unemployed participants have a higher median number of days of participation, 30.1, as do those not in the labor force, 21.2, than do employed persons, 14.0. For individuals 20 years of age and older the number of days of participation is not strongly related to education. The number of days is, however, strongly related to size of household which in turn is related to the presence of children and teen agers. In 1 to 2 person households the median is 8.9, in 3 to 4 person households it is 16.0, and in 5 and over, 23.4. While the sample of individuals from noncar-owning households is small, there is sufficient basis for concluding that the median number of basketball days per participant for this group is substantially higher than it is for car owners, 112.8 vs. 18.0. (2-167)

The median number of days of participation is related to the age of the head of the household, which in turn is probably related to the presence of young children and teen agers in the household. In households whose heads are younger than 30 the median is 11.9. In the 30 to 44 year age bracket it is 18.9, and it rises to 21.9 in the 45 to 64 year age bracket. The median number of basketball days per participant in households in the 65 and over age bracket is 8.8. (2-168)

Whereas the median basketball participation is not strongly related to education of the subject it is inversely related to the education of the head of the household, which in turn is related to economic status. Among participants from households where the head has had less than 9 years of schooling the median number of days of participation is 33.2, for those with 9 to 11 years of schooling it is 23.4. Among households whose head has had 12 years of schooling the median falls to 14.3, and it rises again to 17.8 for households where the head has had at least some college. (2-168)

Where the head of the household is unemployed the median participation is far higher than where he is employed, 47.5 vs. 17.4. Nonwhite basketball players play about 5 times as many days per year as do white basketball players, 89.5 vs. 17.2. (2-168)

The median number of basketball days per participant increases with population density. In the low density places, under 1,000 persons per square mile, the median is 15.1. In the medium density places, 1,000 to 5,999 persons per square mile, it is 18.9, and in the high density places it is 19.4. The regions showing higher medians than the statewide median of 18.2 are regions one, three, eight, and ten. The three highest medians are in regions one, 20.4; three, 22.3; and eight, 38.2. It should be mentioned that the sample is quite small in region eight. The three regions with the lowest medians are four, 10.2; seven, 9.7; and nine, 10.1. The sample in region four is small. (2-285)

Indoor basketball activity days

Of the four activities for which indoor participation data were obtained, indoor participation is most important for basketball. Fully 59.0% of basketball players played at least one day indoors in the past year. For those who played indoors the median number of days indoors is 15.0. The percentage of players who played indoors peaks in the 10 to 19 year age category at 67.0%. It falls off gradually in the higher age groups to 59.2% in the 20 to 29 group, to 54.8% in the 30 to 44 group, and to 41.3% in the 45 to 64 group. No individual 65 or older in the survey played basketball. In the 5 to 9 year age group only 24.2% of basketball players played indoors. The median number of indoor days per indoor participant decreases steadily with increasing age. In the 5 to 9 year age group it is 42.0; in the 10 to 19, 16.6; in the 20 to 29, 13.3; in the 30 to 44, 7.9; and in the 45 to 64, 4.3. (2-236)

A slightly higher proportion of male basketball players played indoors, 59.7%, than female, 57.5%. However, the male median number of indoor days per indoor participant, 19.7 days, is strikingly higher than the female median, 9.9 days.

The percentage of basketball players who played indoors at least once varies irregularly with respect to total family income, peaking at 66.7% in the $4,000 - $6,999 group and at 61.5% in the $15,000 and over group. Under $4,000, 54.3% of basketball players played indoors; in the $7,000 to $9,999 group, 58.2%; and in the $10,000 to

$14,999 group, 56.7%. The median number of indoor days per indoor participant is a U-shaped function of income, reaching 37.4 in the under $4,000 group; and 15.1, in the $15,000 and over group. In the $4,000 to $6,999 group it is 20.2; in the $7,000 to $9,999 group, 13.2; and in the $10,000 to $14,999 group, 13.8. (2-236)

A slightly higher proportion of employed basketball players, 62.1%, played indoors at least once than did those not in the labor force, 56.7%, or unemployed players, 55.0%. The median number of indoor days for employed indoor participants, 14.5, is smaller than for those not in the labor force, 14.9, or those unemployed, 20.3. (2-237)

Among basketball players 20 years of age and older the proportion who played indoors at least once varies irregularly with respect to education. Among players with 9 to 11 years of schooling, 39.4% played indoors. The percentage rises in the 12 years of schooling group to 43.0%, and reaches its peak in the some college group, 73.6%. Among college graduates the proportion falls off to 64.9%. At the lower end of the education scale, 69.2% of players with less than 9 years of schooling played indoors. However, the sample for the last group is very small. The median number of indoor days per indoor participant also behaves irregularly with respect to education. The median is 9.1 days for players with 12 years of schooling, 14.1 for those who have had some college, and it falls back to 8.7 among college graduates. A very high median, 39.5, appears for the 9 to 11 years of schooling group. This high value may be due to chance because of the small sample involved. (2-237)

The percentage of basketball players who played indoors at least once rises steadily with increasing size of household: 52.4% for 1 or 2 person households, to 56.1% for 3 or 4 person households, to 62.4% for 5 or more person households. The median number of indoor days per indoor participant also increases steadily by size of household. For 1 or 2 person households it is 8.9, for 3 to 4 person households, 13.9, and it reaches 17.3 among 5 or more person households.

The fraction of basketball players from noncar-owning households who played indoors, 63.0%, is greater than for car-owning households, 58.9%. The median number

of indoor days per indoor participant is also greater for the former group, 29.9, than for car-owning households, 14.8. It should be pointed out, however, that the sample of basketball players from the noncar-owning households is small. (2-237)

The fraction of basketball players who played indoors at least once is a direct function of the age of the head of the household. For those players from households where the head is under 30 years of age, 48.3% played indoors, compared to 55.2% for 30 to 44 years, 66.0% for 45 to 64 years, and 81.2% for 65 and older. The median number of indoor days per indoor participant increases up to age 65. In households where the head is under 30 the median number of days played indoors is 10.9, compared to 14.4 for 30 to 44 years, 17.4 for 45 to 64, and 10.3 days for players from households where the head is 65 and older. (2-238)

The proportion of basketball players who played indoors at least once varies irregularly with respect to the education of the head of the household. For households where the head has had less than 9 years of schooling, 60.9% of players played indoors, compared to 63.8% for 9 to 11 years. In the 12 years of schooling category the percentage falls to 53.1% and then increases to 63.0% where the head of the household has had at least some college. The median number of indoor days per indoor participant falls off steadily to 12 years of schooling and then rises again. Where the head of the household has had less than 9 years of schooling the median is 27.6 days. The median falls to 16.5 in the 9 to 11 year group and to 10.5 in the 12 years of schooling group. It then rises to 18.4 for players from households where the head has had at least some college. (2-238)

The proportion of players who played indoors at least once varies slightly according to employment status of the head of the household. Where the head is employed 58.6% of players played indoors compared to 63.8% where the head is not in the labor force and 59.4% where the head is unemployed. The median number of indoor days per indoor participant is 15.3 where the head is employed, 14.1 where he is not in the labor force, and 12.8 if he is unemployed. (2-238)

The proportion of nonwhite players who played indoors at least once, 69.1%, is substantially higher than for white players, 58.5%. The nonwhite median number of indoor days played, 47.1, is substantially higher than for white, 13.9. (2-238)

The fraction of basketball players who played indoors at least once is greater in the medium density places, 61.9%; and in the low density places, 61.6%; than in the high density places, 54.2%. The median number of indoor days per indoor participant peaks strongly in the medium density places, 18.7 days, compared to 14.2 days in the high density places and 9.6 days in the low density places. (2-299)

The regions with a fraction of basketball players who played indoors which is higher than the statewide fraction of 59.0% are regions one, 61.7%; three, 67.1%; four, 73.1%; five, 74.7%; six, 63.0%; and eight, 70.4%. The two regions with the lowest fractions are regions seven, 44.1% and nine, 50.0%. Regions showing a higher median number of indoor days per indoor participant than the statewide median of 15.0 are regions two, 16.5; three, 19.2; five, 16.6; six, 17.6; and ten, 15.3. The two lowest medians are in regions four, 7.4, and nine, 9.5. (2-299)

Activity days in baseball or softball

The median number of days of participation per participant overall for baseball or softball is 13.8. It is approximately 21 days for the two age categories under 20: 20.8 for the 5 to 9 year olds and 21.1 for the 10 to 19 year olds. Among 20 to 29 year old participants the median is 7.5; among 30 - 44 year old participants, 9.0; among 45 - 64 year old participants, 5.1; and 3.7 for 65 and over participants. (2-171)

Male baseball players have a median participation of 17.3 days, compared to 10.6 days for female players. (2-171)

Except for the $4,000 to $6,999 income category where the median is 19.3 days, the median is stable between 12 and 14 days for all income categories. (2-171)

Median participation is higher for participants not in the labor force, 18.5 days, than for those who are employed, 10.2, or unemployed, 12.2. (2-172) Participants not

in the labor force include a concentration of children and teen agers.

The median number of days of participation for baseball players 20 or more years of age is an irregular function of education, peaking at approximately 11 days for participants with some high school and some college education. (2-172)

Because baseball participation is highest among children and teen agers, the median number of days per participant is strongly a function of size of household, ranging from 5.1 days for 1 or 2 person households, to 12.2 for 3 or 4 person households, to 17.4 for 5 or more person households. In contrast to the situation for basketball, median participation in baseball is not strongly a function of car ownership. It is 13.9 days for participants in car-owning households and 12.6 for those in noncar-owning households. (2-172)

The median number of days of baseball participation is strongly a function of the age of the head of the participant's household, peaking at 16.2 days for participants in households where the head is 30 to 44 years of age. It is slightly below average in the 45 - 64 year category, 13.5 days. The median is 7.5 days in the under 30 category and 7.8 in the 65 and older category. (2-173)

In contrast to the situation for basketball, the median number of days of baseball participation is virtually invariant with respect to the education of the head of the participant's household, approximately 14 days. It follows that the response of the median to the participant's education is related more to the participant's age than to his educational status. (2-173)

Again, in contrast to the situation for basketball, the median number of days per participant is higher for baseball players from households where the head is employed, 14.1 days, than for those where the head is not in the labor force, 10.9, or is unemployed, 7.0. The medians for white and nonwhite baseball players are identical, 13.8, once more in striking contrast to basketball. (2-173)

The median number of days of participation in baseball or softball is greatest among baseball players from the medium density places, 14.3 days. It is next highest

in the high density places, 13.8, and lowest in the low density places, 12.8. The regions having higher medians than the statewide median of 13.8 are regions one, three, five, six, seven, and nine. The two regions with the highest medians are three, 16.6; and seven, 16.9. The regions with the two lowest medians are regions two, 12.2; and four, 8.1. (2-286)

Football activity days

The participation patterns for football much more closely resemble the patterns for baseball than those for basketball. The median number of days per football participant is 12.0, which is not greatly exceeded in the 2 youngest age groups; the median is 13.1 in the 5 to 9 year age group and 13.9 in the 10 to 19 year age group. In the remaining age groups 30 - 64 the median is stable at 8 or 9 days. The survey encountered no football participants 65 and over. (2-176)

The median number of days per participant for males approaches twice that for females, 13.3 vs. 7.9. The participation is fairly stable at 11 to 13 days across all income categories except, as in the case of baseball, in the $4,000 - $6,999 category where the median rises to 20.1. (2-176)

The median number of days of participation is greatest among football players who are not in the labor force, including a concentration of children and youths, 13.8 days, compared to 9.9 days for employed participants, and 5.3 days for unemployed participants. The median number of days of participation varies irregularly with respect to the participant's education. It also varies somewhat with size of household but less strongly than in the case of baseball. In 1 or 2 person households the median is 7.7 days, compared to 12 or 13 days in larger households. (2-177)

The median number of days per football participant is unrelated to car ownership. (2-177)

The medians for participants in households whose heads are in the two middle age cagegories, 30 - 44 and 45 - 64, are slightly above the median for all participants. In the under 30 category the median falls to 9.2 days and in the 65 and over category to

4.0. (2-178)

The median number of days of football participation is relatively unresponsive to education of the head of the participant's household, reaching a maximum of 13.6 days for participants in households whose head has had 9 to 11 years of schooling. Participation is also relatively unresponsive to the employment status of the head of the participant's household. Nonwhite participants show slightly higher median days, 13.6, than white, 11.9. (2-178)

The median number of days per participant for football falls off dramatically to 9.4 days in the low density places, compared to 12.6 days in the medium density places, and 12.1 days in the high density places. The regions with medians higher than the statewide median of 12.0 are regions three, five, six, and eight. The two highest medians are for regions three, 13.6; and five, 14.5. The two lowest medians are for region four, 9.5; and region seven, 9.9. (2-287)

Street hockey activity days

The median number of days per participant for street hockey, 13.7, is comparable to that for baseball and football. It peaks in the 10 to 19 year age category, 17.9, and is stable at 11 or 12 days in the other categories under 45 years of age. It falls off dramatically in the 45 to 64 years age category. The survey encountered no street hockey participants 65 or over. (2-181)

The median number of days per male participant is approximately twice that for female, 16.8 vs. 8.5. Participation appears to be approximately level for incomes over $7,000, 12 to 14 days. Below $7,000 income there is not sufficient data on which to base the computation of a median. (2-181)

The median is apparently somewhat higher for households where the head has had high school education vs. some college, 17.6 vs. 12.3. (2-183)

Street hockey is almost entirely a white sport to date; there were no nonwhite street hockey players encountered in the survey. (2-183)

The bulk of street hockey players are from medium and high population density places. The median number of days per participant for the high density places, 22.8, is distinctly higher than for the medium density places, 10.0. While the number of street hockey players residing in the low density places is small, the median participation is relatively high, 18.8 days. Street hockey participation is primarily restricted to regions one and ten. In region one the median participation, 16.2, is higher than the statewide median of 13.7. The median in region ten is slightly below, 13.2. The medians in the remaining regions are unreliable because the samples are too small. (2-288)

Bicycling activity days

The median number of days of participation is much higher for bicycling than for any of the other 18 activities surveyed, 32.2 vs. 20.5 for the next highest activity, swimming. It should be pointed out that some of the bicycling is nonrecreational, however. The heaviest bicycling participation is in the 5 to 9 and 10 to 19 year age groups. Here trips to school, store, or the use of a bicycle in connection with a paper route are not distinguished from recreational uses. The median number of bicycling days per participant in the 5 to 9 year age category is 133.1. In the 10 to 19 year age grouping, it is 64.0. From ages 20 to 64 it remains virtually constant at 12 to 14 days. There are relatively few cyclists 65 and over, where the median is 24.5 days. (2-186)

Male cyclists participate a slightly higher number of days than female, 36.6 vs. 29.1. (2-186)

Median participation is an irregular function of family income. It is highest in the under $4,000 category, 46.9. It then falls drastically to 22.8 in the $4,000 - $6,999 category, rises to 28.8 in the $7,000 - $9,999, and rises still further to 37.7 in the $10,000 - $14,999 group. It then declines slightly below the average for all cyclists to 30.5 in the $15,000 and over households. (2-186)

Naturally, the median number of days for cyclists not in the labor force (who are mostly children), 56.2, is much higher than for the employed, 14.6, and the unemployed,

13.9. The median participation of cyclists aged 20 and over is relatively unresponsive to education, ranging from 10 to 15 days. (2-187)

Since household size is related to the number of children present in the household, median participation is highly responsive to household size, ranging from 16.4 for participants in 1 or 2 person households, to 26.3 for 3 or 4 person households, to 43.5 for households with 5 or more persons. The median number of bicycling days for participants in noncar-owning households, 44.5, is distinctly higher than for those in car-owning households, 32.2, suggesting that the bicycle is used as a car substitute to some degree. (2-187)

The median number of days of participation in relation to age of head of household peaks in two categories: in the 30 - 44 age range at 39.5, reflecting the presence of children, and in the 65 and over group, 37.6, reflecting the higher median days of older cyclists. In the under 30 age category the median is 18.4, and in the 45 to 64 it is 25.6. (2-188)

For households where the head has had no college there is a gradual increase in participation with education from 29.2 days for less than 9 years of schooling to 31.8 for 12 years of schooling. There is then a distinct jump for households where the head has had at least some college, 36.1. (2-188)

The median number of bicycling days per participant is much higher where the head of the household is employed, 33.8, than where he is unemployed, 23.0, or not in the labor force, 19.9. Median participation for nonwhites, 44.2 days, is much higher than for whites, 32.0. (2-188)

The median number of bicycling days per participant is slightly inversely related to population density. In the low density places it is 33.3, in the medium density places, 32.5, and in the high, 30.9. There is dramatic variation by region in median participation. The regions showing higher medians than the statewide median of 32.2 are regions one, three, six, seven, eight, and nine. The regions with the highest medians are three, 48.1, eight, 64.5, and nine, 47.7. The regions with the lowest medians are four, 24.5,

and five, 13.8. The differences in the medians by region are probably due to differences in the proportion of cyclists who are children. Regions which have fewer adult cyclists would tend to have higher medians. The proportion of adult cyclists is probably influenced by the topography. (2-289)

Horseback riding activity days

The median number of days per participant for horseback riding is one of the smallest of all activities, 4.0. The medians are highest for the 2 youngest age groups, 7.4 for the 5 to 9 year olds, and 4.5 for the 10 to 19 year olds. Above 20 the median number of days of participation increases with increasing age, 3.1 for 20 to 29 years, 3.2 for 30 to 44 years, and 3.6 for 45 to 64 years. The median for 65 and over probably is still higher; however, the sample is too small to provide a reliable figure. (2-191)

The median number of days per participant for males and females are practically identical, 4.0 and 4.1, respectively. (2-191)

The median number of days per participant reaches a peak in the $10,000 to $14,999 income class. Horseback riders from families with incomes under $4,000 have a median of 2.3; in the $4,000 - $10,000 range the median is approximately 4.3. In the $15,000 and over class it falls to 3.7. (2-191)

Horseback riders not in the labor force have a higher median, 5.3, than do horseback riders in general. The former group has a concentration of young children and teen agers. (2-192)

Among horseback riders 20 or more years of age the effect of education is irregular. The highest median, 6.0, is in the 9 to 11 years of schooling category. It falls off to 3.5 for 12 years of schooling, rises to 4.1 for individuals with some college, and again falls to 2.3 for college graduates. (2-192)

Unlike most other activities which show higher participation among children and teen agers, horseback riding shows median participation which is relatively unresponsive to size of household, being approximately 4 days for the 3 household size categories. (2-192)

Only 2.3 percent of horseback riders live in households without a car. The median for noncar-owners, 2.5, is below the median of 4.0 for horseback riders from car-owning households. (2-192)

The median number of days per participant is responsive to the age of the head of the household, reaching a peak of 4.9 in the 30 to 44 age group. It falls off to 2.3 in the 65 and over category. In the 2 remaining categories under 30 it is 3.6, and in the 45 to 64, 3.8. (2-193)

There is dramatic variation in median participation with respect to the education of the head of the household. The median number of days per participant in the 9 to 11 years of schooling group, 11.1, is approximately 3 times that of the remaining groups which range from 3 to 4 days. (2-193)

Nonwhite horseback riders have a higher median, 5.1, than white, 4.0. (2-193)

The highest median participation for horseback riding is among residents of the low population density places, 5.2. The median for the high density places is 4.6 and for the medium density places, 3.3. The regions showing higher medians than the statewide median of 4.0 are regions seven, eight, nine, and ten. The regions with the highest medians are seven, 5.1; eight, 5.3; and nine, 8.4. The regions with the lowest medians are five, 2.5; and six, 2.3. (2-290)

Activity days for hiking or nature walks

For all age groups except the 65 and over category the medians for hiking or nature walks are close to the overall median of 8.4 days. In the 65 and over category the median number of days per participant jumps approximately 60% to 13.7. (2-196)

The female median, 8.9, is higher than the male, 7.8.

The median participation increases steadily and gradually with family income below $15,000, from 7.0 in the under $4,000 class, to 9.3 in the $10,000 to $14,999 class. In the $15,000 and over class it falls to 8.2. (2-196)

As is the case for most activities, individuals not in the labor force show a higher

median participation, 9.3, than do those who are employed, 7.5. However, in the case of hiking or nature walks the higher median for participants not in the labor force arises not from a concentration of children but from the higher participation of individuals 65 and over. (2-197)

The medians among participants 20 and over are relatively unresponsive to the number of years of education, ranging from 6.4 for those with less than 9 years of schooling to 8.6 for those with 9 to 11 years of schooling. (2-197)

The medians are inversely related to size of the participant's household, ranging from 9.1 for 1 to 2 person households to 8.0 for 5 or more person households, again reflecting the higher participation of older persons. There is virtually no difference between the median number of days for participants in car-owning or noncar-owning households. (2-197)

The median is relatively invariant with respect to age of head of household up to the 65 and over category, where it jumps to 12.4. (2-198)

The median number of days per participant for hiking or nature walks is irregularly responsive to the education of the head of the household.

Again reflecting the higher participation of older individuals, the median for participants from households with heads not in the labor force is 9.4, one day higher than the overall median. (2-198)

The median for whites, 8.5, is approximately twice that for nonwhites, 4.5. (2-198)

The median number of days per participant for hiking or nature walks is greater in the medium population density places, 9.2, than in the low density, 8.9, or the high density, 7.1. The regions showing higher medians than the statewide median, 8.4, are regions two, three, four, seven, eight, and nine. The two regions showing the highest medians are region four, 18.7 (where the sample is small), and region eight, 13.0. The three regions with the smallest medians are one, 7.9, five, 7.8, and ten, 7.8. (2-291)

Camping activity days

The median number of days per participant in camping is 6.4. The median is an irregular function of age, ranging from a low of 4.9 days for the age group 20 - 29, to a maximum of 7.3 for campers 65 and older. (2-201)

Male campers have a somewhat higher median number of days, 7.0, than female campers, 5.4. (2-201)

Median camping participation increases with total family income up to $10,000, moving from 3.7 days for under $4,000, to 4.5 for $4,000 to $6,999, to 6.6 for $7,000 to $9,999, to 6.7 for the $10,000 to $14,999 and the $15,000 and over groups. (2-201)

Campers not in the labor force have a somewhat higher median, 6.7, than do employed campers, 5.9. (2-202)

Among campers 20 or more years of age the median number of days falls off appreciably in the less than 9 year education class, 4.2, and among college graduates, 4.5. It rises steadily in the three middle education categories, 6.2 for 9 to 11 years of schooling, 6.6 for 12 years, and 8.5 for some college. The median number of camping days is inversely related to size of the participant's household, 7.3 for 1 or 2 person households, 6.5 for 3 or 4, and 6.0 for 5 and over. The median number of days camping is considerably reduced, 3.7, for participants in noncar-owning households. (2-202)

The median is an irregular function of age of head of the household, peaking at 6.8 days in the 30 to 44 age group, and 7.2 in the 65 and over. The median is 5.6 for the under 30 group, and 5.9 for the 45 to 64 group. (2-203)

The median number of days camping is also an irregular function of education of the head of the participant's household, peaking at 7.7 in the 9 to 11 years of schooling group, and 6.7 in the some college group. For households whose head has had less than 9 years of schooling the median is 6.6; for households where the head has had just 12 years of schooling it is 5.5. (2-203)

The median number of days per participant is substantially higher where the head of the household is not in the labor force, 7.4, than where the head of the household is

employed, 6.3. The very small number of nonwhite campers in the survey, 1.2%, show a slightly larger median, 7.6, than do white campers, 6.3. (2-203)

The median number of days per participant for camping is highest among residents of the medium and low population density places, 6.9 and 6.1 respectively. In the high density places it is 5.6. The regions with medians higher than the statewide median of 6.4 are five, six, eight, nine, and ten. The three regions with the highest medians are five, 8.0, eight, 8.0, and nine, 9.7. The three regions with the lowest medians are two, 4.5, three, 4.4, and four, 4.0. (2-292)

Activity days for off-road motorcycling or riding snowmobiles

The median number of days per participant for off-road motorcycling or riding snowmobiles is 9.5. The median is an irregular function of age, peaking in the 10 to 19 year age group, 12.9, and the 30 - 44 year age group, 11.5. In the remaining age groups under 65 the median is stable between 6 and 7 days. A negligible portion of participants, 0.3% are 65 and over so that a reliable median for that age group is not available. (2-206)

The median number of days for male participants, 11.8, is nearly twice that for females, 6.4. (2-206)

The medians respond irregularly to total family income, peaking in the $4,000 - $6,999 group, 11.2, and in the $15,000 and over group, 10.7. In the remaining groups the median varies from 7 to 9 days. (2-2C6)

Contrary to many other activities the median number of days for employed participants, 9.6, is higher than for those not in the labor force, 9.0. (2-207)

Among participants 20 or more years of age the median number of days diminishes steadily with increasing education. For participants with less than 12 years of schooling the median is 13.2, compared to 9.0 for those with 12 years, 6.8 for those with some college, and 5.8 for college graduates. (2-207)

The median number of days per participant decreases with increasing size of household, 10.9 for 1 or 2 person households, 10.2 for 3 or 4 person households, and 8.8

for 5 or more.

The median for participants from car-owning households, 9.6, is more than three times that for participants from noncar-owning households, 3.0. However, since the latter group constitutes only 0.8% of participants the median is unreliable. (2-207)

With respect to age of head of household, the median peaks at 11.0 in the 30 - 44 year bracket, being 7.4 in the less than 30 group, and 8.8 in the 45 - 64 year age group. (2-208)

With respect to the education of the head of the household, the median peaks in the 9 to 11 years of schooling group, 11.8, falls to 7.7 for less than 9 years, and to 9.5 where the head has had 12 years of schooling. Where the head has had some college it diminishes still further to 8.6. (2-208)

The median where the head is not in the labor force, 10.6, is slightly higher than where the head is employed, 9.5.

The median for nonwhites, which is not statistically significant, is appreciably higher than that for whites. (2-208)

The median number of days per participant in off-road motorcycling or riding snowmobiles is substantially higher in the medium population density places, 11.0, than in the low, 7.3, or high density places, 6.9. The regions showing medians higher than the statewide median of 9.5 are one, three, six, seven, and nine. The three highest medians are in regions three, 14.4, six, 12.3, and seven, 12.7. The three lowest medians are in regions two, 4.3, four, 4.4, and five, 4.2. (2-293)

Activity days for sightseeing or driving for pleasure

The median number of days per participant for sightseeing or driving for pleasure is 13.9. The median is relatively unresponsive to changes in most of the demographic variables. With respect to the age of the participant, the median peaks at 15.7 in the two age categories 10 - 19 and 20 - 29. In the 5 - 9 age bracket it is 13.7 and in the 30 - 44 it is 13.0. It then rises to 13.6 in the 45 - 64 bracket and falls to 12.4 in the 65 and over. (2-211)

Female participants have a slightly higher median, 14.1, than male, 13.6. (2-211)

The median number of days sightseeing or driving for pleasure increases steadily with rising income from 11.9 in the under $4,000 category to 15.1 in the $15,000 and over category. (2-211)

Unemployed sightseers have a somewhat higher median, 17.2, than employed, 13.6, or those not in the labor force, 14.0. (2-212)

The median among sightseers 20 or more years of age increases with increasing education up to the college graduate category. For participants with less than 9 years of schooling it is 10.9, for 9 to 11 years, 12.4, for 12 years, 13.9, and for participants with some college, 15.7. Among college graduates it falls back to 13.8. (2-212)

The median is somewhat unresponsive to size of the participant's household, being 14.3 for the 1 or 2 person households, 14.4 for the 3 or 4, and falling back to 13.0 for the 5 and over.

As would be expected the median is strikingly higher for participants in car-owning households, 14.0, than for noncar-owning households, 8.7. (2-212)

The median number of days of participation is appreciably greater among participants in households where the head is under 30 years of age, 16.6, than for those in the older age categories where the median ranges from approximately 13 to 14 days. (2-213)

With respect to the education of the head the median peaks in the 12 years of schooling category, 14.4. For less than 9 years of schooling it is 11.8, for 9 to 11, 13.3, and for households where the head has had at least some college, 14.1. (2-213)

Participants from households where the head is unemployed have a substantially higher median, 20.0, than do those where the head is not in the labor force, 14.4, or is employed, 13.7. Nonwhites have a substantially higher median participation, 18.8, than whites, 13.8. (2-213)

The median number of days of sightseeing or driving for pleasure is inversely related to population density. The median is 15.6 in low density places, 14.2 in medium density places, and 13.0 in high density places. The regions having medians higher than

Female participants have a slightly higher median, 14.1, than male, 13.6. (2-211)

The median number of days sightseeing or driving for pleasure increases steadily with rising income from 11.9 in the under $4,000 category to 15.1 in the $15,000 and over category. (2-211)

Unemployed sightseers have a somewhat higher median, 17.2, than employed, 13.6, or those not in the labor force, 14.0. (2-212)

The median among sightseers 20 or more years of age increases with increasing education up to the college graduate category. For participants with less than 9 years of schooling it is 10.9, for 9 to 11 years, 12.4, for 12 years, 13.9, and for participants with some college, 15.7. Among college graduates it falls back to 13.8. (2-212)

The median is somewhat unresponsive to size of the participant's household, being 14.3 for the 1 or 2 person households, 14.4 for the 3 or 4, and falling back to 13.0 for the 5 and over.

As would be expected the median is strikingly higher for participants in car-owning households, 14.0, than for noncar-owning households, 8.7. (2-212)

The median number of days of participation is appreciably greater among participants in households where the head is under 30 years of age, 16.6, than for those in the older age categories where the median ranges from approximately 13 to 14 days. (2-213)

With respect to the education of the head the median peaks in the 12 years of schooling category, 14.4. For less than 9 years of schooling it is 11.8, for 9 to 11, 13.3, and for households where the head has had at least some college, 14.1. (2-213)

Participants from households where the head is unemployed have a substantially higher median, 20.0, than do those where the head is not in the labor force, 14.4, or is employed, 13.7. Nonwhites have a substantially higher median participation, 18.8, than whites, 13.8. (2-213)

The median number of days of sightseeing or driving for pleasure is inversely related to population density. The median is 15.6 in low density places, 14.2 in medium density places, and 13.0 in high density places. The regions having medians higher than

the statewide median of 13.9 are regions one, three, four, and nine. The regions with the two highest medians are three, 18.0, and four, 18.4. The regions with the two lowest medians are two, 12.9, and five, 12.6. (2-294)

Snow skiing activity days

The median number of days per participant in snowskiing is 4.2. Below age 30 the median ranges between 3.5 and 4.0, and for 30 and above it is approximately 7 days. Male skiers ski approximately one more day, 4.8, than female, 3.8.

The data is too thin to establish a clear picture of how the median for skiing varies with respect to total family income. It would appear, however, that above the $10,000 level the median number of days per participant is approximately half a day higher than it is below $10,000. (2-216)

There is a suggestion in the data that skiing participants who are unemployed may ski substantially more days, 12.6, than skiers who are employed, 6.5, or those not in the labor force, 3.0. (2-217)

It would appear that skiers from smaller households ski perhaps a day or two more than skiers from larger households. No skiers from noncar-owning households were encountered in the survey. (2-217)

With respect to age of the head of the participant's household, the highest median is in the 30 - 44 year group, 5.2, compared to 4.4 for the age group below, and 3.7 for the age group above. With respect to education of the head of the participant's household, the highest median is for participants in households where the head has had some college, 5.8. Participants from households where the head is employed have a higher median, 4.5, than where the head is unemployed or not in the labor force. However, the latter two categories are too small in size for reliability. No nonwhite skiers were encountered in the survey. (2-218)

The median number of days per participant for snow skiing is greater in the medium population density places, 6.5, than in the low density places, 4.0, or the high density places, 3.2. Only regions one and ten are represented by samples of reasonable size.

The median for region one, 2.5, is below the statewide median of 4.2, which is equalled by the median for region ten. (2-295)

Ice skating activity days

The median number of days per participant for ice skating is 5.7. It decreases with increasing age up to age 45: it is 6.8 for 5 to 9, 6.3 for 10 - 19, 5.9 for 20 to 29, and 4.2 for 30 to 44. For 45 to 64 it again rises to 5.0. Female skaters participate slightly more than male, 6.0 vs. 5.3 days. The relationship between median days and total family income is irregular, peaking slightly at $7,000 to $9,999 and at $15,000 and over. (2-221)

Because the participation of children and teen agers is higher than for the general population, the median for participants not in the labor force, 6.2 days, is higher than for employed participants, 5.2. (2-222)

The median rises with rising education up to the college graduate level: 4.0 for participants with less than 12 years of schooling, 5.1 for 12 years, and 5.5 for some college. For college graduates it declines to 5.2. The median is an irregular function of size of household: 4.6 for participants in 1 or 2 person households, 4.4 for 3 or 4, and 6.8 for 5 and over. (2-222)

Ice skaters from car-owning households show substantially higher medians than from noncar-owning; however, the number of participants from noncar-owning households is too small for a reliable computation of a median. (2-222)

Median days of ice skating increases with increasing age of head of household: 4.8 for under 30 years, 5.8 for 30 to 44, 5.8 for 45 to 64, and 9.5 for 65 and over. The last figure is not statistically reliable. (2-223)

With respect to education of the head of the participant's household the median number of days of ice skating peaks in the 12 years of schooling category, 5.9. It declines to 5.4 days for 9 to 11 years of schooling and to 5.6 for participants where the head of household has had at least some college. In the less than 9 years of schooling category the median also peaks, 7.6 days. (2-223)

Where the head of the household is not in the labor force the median is 7.5, compared to 5.7 for ice skaters from households where the head is employed. (2-223)

The fraction of nonwhite participants is almost negligible, 0.9%, so that the median is not statistically reliable; however, there is a suggestion that the median number of days for nonwhites may be somewhat higher than for whites. (2-223)

The median number of days per participant in ice skating is inversely related to population density. It is 7.0 in the low density places, 5.8 in the medium density places, and 4.5 in the high density places. The regions which show higher medians than the statewide median of 5.7 are regions two, three, four, five, eight, and nine. The two highest medians are for regions four, 8.7, and nine, 9.8. The two lowest medians are for regions six, 4.1, and seven, 4.0. (2-296)

Indoor ice skating activity days

Among the four activities for which indoor participation was obtained--namely swimming, tennis, basketball, and ice skating--ice skating is second in terms of the proportion of participants who participated at least once indoors, 36.0%. The median number of indoor days per indoor participant is 4.2.

Except for the 65 and over category, where virtually no skaters were encountered in the survey, the percentage of skaters who skated indoors at least once varies only slightly by age, holding between 30% and 40%. In the 5 to 9 year age group the proportion is 39.8%, in the 10 to 19, 35.5%, in the 20 to 29, 39.3%, in the 30 to 44, 30.7%, and in the 45 to 64, 37.5%. However, the median number of indoor days per indoor participant does vary substantially by age, moving from 5.0 days for the 5 to 9 group, up to 6.0 in the 10 to 19, falling to 3.8 in the 20 to 29, and falling still further to 2.6 in the 30 to 44. In the 45 to 64 group it rises again to 3.8. (2-241)

The proportion of male skaters who skated indoors, 35.4%, is only slightly less than that of female, 36.5%. The median number of indoor days per indoor participant for males, 4.8, is slightly greater than for females, 3.8.

Above $4,000 family income the fraction of skaters who skated indoors at least once

increases with increasing family income. In the $4,000 to $6,999 group it is 27.5%; in the $7,000 to $9,999, 30.1%; in the $10,000 to $14,999, 35.0%; in the $15,000 and over 38.5%. In the under $4,000 category, 59.0% of skaters skated indoors; however, the percentage is in doubt because the sample for this group is small. The median number of indoor days per indoor participant varies irregularly with respect to income. The median is 5.3 days in the $7,000 to $9,999 group; 3.5 in the $10,000 to $14,999 group; and 4.5 in the $15,000 and over group. (2-241)

Skaters who are not in the labor force are more likely to have skated indoors, 38.7%, than those who are employed, 32.4%, or those who are unemployed, 14.3%. The median number of indoor days for indoor participants not in the labor force, 4.4, is greater for those employed, 3.9. (2-242)

The proportion of skaters 20 or more years of age who skated indoors increases with increasing schooling up through the some college group and then falls off among college graduates. Among skaters with less than 12 years of schooling, 25.9% skated indoors, compared to 31.5% for those with 12 years of schooling, 47.6% for those with some college, and 35.7% for college graduates. The median number of indoor days per indoor participant varies with education similarly to the proportion who skated indoors. The median is 2.9 for those with 9 to 11 years of schooling, 3.6 for those with 12 years, 3.8 for those with some college, and falls off to 2.5 for college graduates. (2-242)

The proportion of skaters who skated indoors is an irregular function of size of the participant's household. Among 1 and 2 person households, 48.7% of the skaters skated indoors, compared to 32.0% for 3 or 4 person households, and 37.0% for 5 or more person households. The median number of days indoors however, increases with size of household. For indoor participants from 1 or 2 person households the median is 3.3; for those from 3 or 4 person households, 3.5; and for those from 5 or more person households, 5.1. (2-242)

A negligible proportion of skaters, 0.9%, are from noncar-owning households, so the sample is too small to make a comparison between car-owning and noncar-owning households. (2-242)

The proportion of skaters who skated indoors is highest in households where the head is under 30 years of age, 40.7%. The proportion declines to 37.9% in the 30 to 44 year age bracket, and still further to 31.8% where the head of the household is 45 to 64. The number of skaters 65 and over is too small to present reliable figures for this group. The medians for the three major age groups are stable near the overall survey median of 4.2. (2-243)

The proportion of skaters who skated indoors increases steadily with education of the head of the participant's household. For skaters in households where the head has had less than 9 years of schooling, 12.0% skated indoors compared to 18.5% for 9 to 11 years, 34.5% for 12 years, and 44.0% where the head has had some college. The median number of indoor days per indoor participant is 2.4 for the 9 to 11 years group, 5.5 for 12 years, and 3.7 for skaters where the head of the household has had some college. A higher proportion of skaters from households where the head was not in the labor force skated indoors, 38.4%, compared to 35.7% where the head is employed. The corresponding medians are 5.5 and 4.1, respectively. (2-243)

While the sample of nonwhite skaters is very small it appears that the fraction of nonwhite skaters who skated indoors is substantially lower than the fraction for white. In the survey, 6.2% of nonwhite skaters skated indoors, compared to 36.4% of white. The nonwhite median is 1.0, compared to 4.2 for white. (2-243)

The fraction of ice skaters who skated indoors at least once increases with increasing population density: 29.0% for the low density places; 31.5% for the medium; and 46.5% for the high density places. The median number of indoor days per indoor participant is highest in the low density places, 6.3, and the high density places, 4.1. In the medium density places it is 3.7. Only two regions have fractions of ice skaters who skated indoors which are higher than the statewide fraction of 36.0%: region one, 44.9%, and region ten, 49.4%. The three regions with the lowest fractions of skaters who skated indoors are region eight, 11.5%; region four, 15.0%; and region three, 18.1%. Regions having median indoor days higher than the statewide median of 4.2 are regions one, 6.1; three, 9.5; and eight, whose high value of 19.5 is due to chance. The two regions with the lowest medians are five, 1.4, and seven, 2.0. (2-300)

Table 6.1.--MEAN AND MEDIAN ANNUAL ACTIVITY DAYS

Activity	Arithmetic mean days		Median days per participant
	Per participant	Per individual 5 years and older	
Total	--	131.26	--
Swimming	31.08	20.72	20.5
Picnicking	8.69	6.13	6.3
Boating, canoeing or waterskiing	8.42	2.58	3.5
Fishing	14.65	4.68	7.3
Hunting or sport shooting ..	15.90	2.23	10.3
Tennis	21.28	5.10	11.4
Golf or miniature golf	13.31	3.85	4.5
Basketball	39.50	8.74	18.2
Baseball or softball	24.24	7.84	13.8
Football	20.68	3.41	12.0
Street hockey	24.20	1.12	13.7
Bicycling	63.68	30.49	32.2
Horseback riding	17.61	1.96	4.0
Hiking or nature walks	18.23	7.44	8.4
Camping	10.86	2.86	6.4
Off-road motorcycling or riding snowmobiles	25.16	3.01	9.5
Sightseeing or driving for pleasure	23.34	16.91	13.9
Snow skiing	7.30	0.36	4.2
Ice skating	8.79	1.86	5.7

Table 6.2.--MEDIAN DAYS OF PARTICIPATION BY AGE AND SEX OF SUBJECT AND TOTAL FAMILY INCOME

Activity	Total	--- Age of subject of interview ---						Sex of subject		-------- Total family income --------				
		5-9 Years	10-19 Years	20-29 Years	30-44 Years	45-64 Years	65 Plus	Male	Female	Under $4,000	$4,000 -6,999	$7,000 -9,999	$10,000 -14,999	$15,000 Plus
Swimming	20.5	36.1	32.2	14.3	15.9	13.7	10.1	19.7	21.4	16.4	14.8	14.3	21.4	26.6
Picnicking	6.3	8.6	4.8	6.8	7.3	5.3	4.0	5.5	6.8	4.2	5.5	6.2	6.5	6.8
Boating, canoeing or waterskiing	3.5	3.6	2.7	2.5	4.3	5.5	7.7	3.8	3.3	2.4	3.2	3.5	3.4	4.1
Fishing	7.8	5.7	7.3	6.6	8.7	8.7	13.0	9.5	4.9	8.8	8.9	8.1	8.2	6.7
Hunting or sport shooting	10.3	5.8	11.3	11.8	10.2	9.3	7.6	11.1	4.0	8.3	9.3	10.4	12.5	7.9
Tennis	11.4	4.0	11.8	13.5	10.1	11.6	2.4	11.0	11.9	3.8	10.6	7.2	10.6	13.9
Golf or miniature golf	4.5	2.8	4.3	5.8	4.0	11.4	9.5	6.4	3.9	3.9	4.1	4.3	4.2	5.8
Basketball	18.2	22.5	25.7	12.6	10.9	6.3		24.4	10.6	54.5	32.5	16.0	18.3	17.1
Baseball or softball	13.8	20.8	21.1	7.5	9.0	5.1	3.7	17.3	10.6	12.8	19.3	13.4	12.3	14.2
Football	12.0	13.1	13.9	8.3	7.9	9.3		13.3	7.9	13.1	20.1	12.1	12.3	10.8
Street hockey	13.7	11.3	17.9	11.5	12.5	3.5		16.8	8.5	29.5	8.1	14.1	14.3	12.5
Bicycling	32.2	133.1	64.0	13.7	12.4	12.2	24.5	36.6	29.1	46.9	22.8	28.8	37.7	30.5
Horseback riding ...	4.0	7.4	4.5	3.1	3.2	3.6	9.5	4.0	4.1	2.3	4.3	4.2	4.6	3.7
Hiking or nature walks	8.4	8.3	8.9	8.3	7.0	8.9	13.7	7.8	8.9	7.0	7.3	7.6	9.3	8.2
Camping	6.4	5.0	7.0	4.9	6.8	6.7	7.3	7.0	5.4	3.7	4.5	6.6	6.7	6.7
Off-road motorcycling or snowmobiling ...	9.5	6.2	12.9	7.1	11.5	6.8	32.0	11.8	6.4	7.0	11.2	9.1	8.0	10.7
Sightseeing or driving for pleasure	13.9	13.7	15.7	15.7	13.0	13.6	12.4	13.6	14.1	11.9	12.9	13.6	14.1	15.1
Snow skiing	4.2	3.5	4.0	3.5	7.0	6.7		4.8	3.8	8.7	2.4	3.7	4.4	4.2
Ice skating	5.7	6.8	6.3	5.9	4.2	5.0	19.5	5.3	6.0	8.3	4.0	5.6	5.1	6.2

Table 6.3.--MEDIAN DAYS OF PARTICIPATION BY EMPLOYMENT AND EDUCATION OF SUBJECT, HOUSEHOLD SIZE, AND CAR OWNERSHIP

Activity	Total	Employment status --- of subject ----			--- Education of subjects --- 20 or more years old					Size of household			Car ownership	
		Employed	Unemployed	Not in labr-f	Up to 8 yrs	9-11 years	12 years	Some coll.	Coll. grad.	1-2	3-4	5 Plus	Own a car	No car
Swimming	20.5	16.1	11.4	26.4	10.4	10.8	13.1	24.5	17.6	13.4	19.7	25.1	20.5	14.1
Picnicking	6.3	6.2	4.4	6.4	4.7	5:2	6.4	6.6	7.0	4.9	6.6	6.5	6.4	3.9
Boating, canoeing or waterskiing ...	3.5	3.8	3.3	3.2	2.6	5.0	4.1	3.1	4.0	3.9	3.6	3.4	3.6	2.0
Fishing	7.8	8.6	16.6	7.0	8.3	8.8	8.9	6.7	7.7	8.6	8.4	7.1	7.8	5.5
Hunting or sport shooting	10.3	10.3	16.3	9.4	7.5	11.4	11.7	8.8	6.5	10.1	9.8	10.9	10.4	1.8
Tennis	11.4	12.6	5.6	10.8	1.1	8.3	9.2	10.3	15.6	10.8	9.6	13.7	11.4	16.5
Golf or miniature golf	4.5	7.0	5.1	3.8	2.0	3.9	5.4	6.4	8.3	8.3	4.4	4.0	4.5	5.5
Basketball	18.2	14.0	30.1	21.2	19.1	12.0	9.7	13.6	10.8	8.9	16.0	23.4	18.0	112.8
Baseball or softball	13.8	10.2	12.2	18.5	4.0	11.2	5.8	10.6	8.6	5.1	12.2	17.4	13.9	12.6
Football	12.0	9.9	5.3	13.8	12.8	13.3	7.0	12.2	6.2	7.7	11.8	12.8	12.0	12.2
Street hockey	13.7	9.4	30.1	15.6		10.0	27.0	12.7	3.7	7.6	23.0	12.6	13.6	29.5
Bicycling	32.2	14.6	13.9	56.2	12.8	14.1	10.8	14.8	14.3	16.4	26.3	43.5	32.2	44.5
Horseback riding ..	4.0	3.2	4.2	5.3	2.4	6.0	3.5	4.1	2.3	3.8	4.2	4.0	4.0	2.5
Hiking or nature walks	8.4	7.5	10.0	9.3	6.4	8.6	8.5	7.8	8.2	9.1	8.5	8.0	8.4	8.3
Camping	6.4	5.9	5.2	6.7	4.2	6.2	6.6	8.5	4.5	7.3	6.5	6.0	6.4	3.7
Off-road motorcycling or snowmobiling ..	9.5	9.6	23.3	9.0	32.0	12.8	9.0	6.8	5.8	10.9	10.2	8.8	9.6	3.0
Sightseeing or driving for pleasure	13.9	13.6	17.2	14.0	10.9	12.4	13.9	15.7	13.8	14.3	14.4	13.0	14.0	8.7
Snow skiing	4.2	6.5	12.6	3.0		7.0	4.4	2.3	6.0	4.5	5.6	3.5	4.2	
Ice skating	5.7	5.2	7.0	6.2	2.3	4.4	5.1	5.5	5.2	4.6	4.4	6.8	5.7	12.0

Table 6.4.--MEDIAN DAYS OF PARTICIPATION BY AGE, EDUCATION, EMPLOYMENT STATUS, AND RACE OF HEAD OF HOUSEHOLD

Activity	Total	Age of head of household				---Education of head---				--Employment status-- Head of household			Race of head of household	
		Up to 29 yr	30-44 Years	45-64 Years	65 Plus	Up to 8 yrs	9-11 Years	12 Years	Some coll.	Employed	Unemployed	Not in labr-f	White	Non-white
Swimming	20.5	15.3	24.6	18.6	14.1	17.9	16.3	18.9	24.3	20.6	16.2	17.7	20.7	12.7
Picnicking	6.3	7.0	7.5	5.0	4.2	5.7	5.4	6.2	6.8	6.4	7.3	4.7	6.4	4.4
Boating, canoeing or waterskiing ...	3.5	2.6	3.7	3.5	7.9	3.7	3.9	3.3	3.7	3.5	7.0	3.6	3.6	1.8
Fishing	7.8	9.3	7.8	7.3	13.1	11.3	7.4	8.3	6.6	7.7	15.6	8.3	7.9	3.0
Hunting or sport shooting	10.3	12.4	10.0	10.3	6.5	8.8	10.2	12.5	7.2	10.3	12.0	10.2	10.3	13.9
Tennis	11.4	12.3	10.8	12.1	6.5	10.1	6.4	10.3	13.2	11.4	6.6	13.1	11.4	18.1
Golf or miniature golf	4.5	5.6	4.0	5.8	8.9	3.4	3.8	4.6	5.2	4.4	5.0	7.6	4.6	4.6
Basketball	18.2	11.9	18.9	21.9	8.8	33.2	23.4	14.3	17.8	17.4	47.5	24.1	17.2	89.5
Baseball or softball	13.8	7.5	16.2	13.5	7.8	13.9	14.0	13.7	13.8	14.1	7.0	10.9	13.8	13.8
Football	12.0	9.2	12.2	12.8	4.0	10.6	13.6	12.2	11.4	11.9	11.2	13.1	11.9	13.6
Street hockey	13.7	22.0	13.7	12.5	32.0	8.3	33.5	17.6	12.3	13.5	41.5	30.7	13.7	
Bicycling	32.2	18.4	39.5	25.6	37.6	29.2	30.9	31.8	36.1	33.8	23.0	19.9	32.0	44.2
Horseback riding ..	4.0	3.6	4.9	3.8	2.3	3.3	11.1	3.6	4.0	4.2	4.3	2.4	4.0	5.1
Hiking or nature walks	8.4	8.7	8.0	8.4	12.4	6.1	9.5	7.8	9.1	8.4	6.5	9.4	8.5	4.5
Camping	6.4	5.6	6.8	5.9	7.2	6.6	7.7	5.5	6.7	6.3	5.6	7.4	6.3	7.6
Off-road motorcycling or snowmobiling	9.5	7.4	11.0	8.8	3.8	7.7	11.8	9.5	8.6	9.5	4.3	10.6	9.4	14.1
Sightseeing or driving for pleasure .	13.9	16.6	13.1	14.5	13.1	11.8	13.3	14.4	14.1	13.7	20.0	14.4	13.8	18.8
Snow skiing	4.2	4.4	5.2	3.7		3.9	4.2	3.1	5.8	4.5	2.8	3.5	4.2	
Ice skating	5.7	4.8	5.8	5.8	9.5	7.6	5.4	5.9	5.6	5.7	8.5	7.5	5.7	8.3

Table 6.5.--MEDIAN DAYS OF PARTICIPATION BY ACTIVITIES PARTICIPATED IN DURING PREVIOUS YEAR

Activity	Total	-------- Activities done by subject of interview during previous year -------- Swim-ming	Picnic-king	Boat-ing	Fish-ing	Hunt-ing	Horse-back riding	Hiking	Camp-ing	Motorcycl. snowmo-biling	Pleasure driving sightseeing
Swimming	20.5	20.5	20.6	25.7	24.8	17.5	28.6	23.4	26.1	25.0	21.0
Picnicking	6.3	6.9	6.3	7.8	7.6	6.7	7.7	8.0	8.5	7.1	6.7
Boating, canoeing or waterskiing	3.5	3.5	3.5	3.5	4.1	4.1	3.7	3.6	4.0	3.7	3.6
Fishing	7.8	7.9	7.8	8.7	7.8	12.6	6.7	8.0	8.7	8.8	7.6
Hunting or sport shooting	10.3	10.1	10.4	10.4	12.0	10.3	14.6	11.6	11.6	10.7	10.1
Tennis	11.4	11.6	11.4	12.8	11.2	12.0	12.9	12.0	13.2	8.9	11.5
Golf or miniature golf	4.5	4.4	4.4	4.6	4.3	6.7	4.3	4.1	3.9	4.2	4.4
Basketball	18.2	18.6	16.5	14.3	18.5	13.4	17.5	14.5	18.6	16.0	16.4
Baseball or softball .	13.8	14.1	13.7	13.6	15.6	13.9	14.5	13.2	14.6	13.9	13.7
Football	12.0	12.2	11.8	11.2	12.2	10.5	11.3	11.3	11.6	11.6	11.7
Street hockey	13.7	13.9	13.0	13.5	13.0	11.3	20.0	11.5	10.7	11.9	13.1
Bicycling	32.2	36.2	31.3	30.5	41.0	27.8	39.2	33.3	36.5	40.9	31.6
Horseback riding	4.0	4.0	4.0	4.2	4.1	6.2	4.0	4.1	4.2	4.0	4.0
Hiking or nature walks	8.4	8.4	8.3	8.6	8.9	8.4	9.3	8.4	8.5	9.9	8.4
Camping	6.4	6.4	6.4	7.2	7.4	7.8	6.9	6.6	6.4	9.0	6.4
Off-road motorcycling or snowmobiling	9.5	9.6	9.0	9.7	11.5	14.0	8.5	9.0	11.9	9.5	8.3
Sightseeing or driving for pleasure	13.9	14.2	14.1	17.0	16.3	14.5	16.8	16.0	15.4	18.4	13.9
Snow skiing	4.2	4.1	3.6	4.1	4.1	4.5	4.9	4.3	3.8	5.5	4.0
Ice skating	5.7	5.8	5.5	5.9	6.7	6.6	6.9	5.5	5.9	7.4	5.6

Table 6.6.--MEDIAN DAYS OF PARTICIPATION BY ACTIVITIES PARTICIPATED IN DURING PREVIOUS YEAR

Activity	Total	------ Activities done by subject of interview during previous year -------								
		Tennis	Golf	Basketball	Baseball	Football	Street hockey	Bicycle	Snow skiing	Ice skating
Swimming	20.5	29.8	25.3	29.5	27.8	29.3	44.0	27.2	40.4	32.1
Picnicking	6.3	6.5	7.0	6.6	6.8	6.3	5.8	7.1	6.8	7.0
Boating, canoeing or waterskiing	3.5	3.0	3.5	3.1	3.5	3.3	3.0	3.4	5.2	3.3
Fishing	7.8	5.5	7.3	7.4	7.8	8.9	10.8	7.9	5.3	7.1
Hunting or sport shooting	10.3	7.3	10.0	9.1	10.4	9.5	11.0	9.5	9.0	10.7
Tennis	11.4	11.4	11.5	12.3	11.7	11.7	11.2	12.2	13.8	12.4
Golf or miniature golf	4.5	5.1	4.5	4.5	4.2	4.4	4.5	4.2	4.2	4.1
Basketball	18.2	20.4	16.7	18.2	20.5	27.2	36.2	18.2	20.5	18.0
Baseball or softball	13.8	13.8	13.4	18.3	13.8	19.5	29.7	14.9	13.5	13.4
Football	12.0	10.9	11.2	12.3	11.9	12.0	13.8	12.1	10.9	11.1
Street hockey	13.7	9.3	17.3	12.8	13.9	13.3	13.7	13.6	9.5	13.1
Bicycling	32.2	32.9	28.6	43.5	44.3	50.1	88.6	32.2	32.2	40.5
Horseback riding	4.0	3.9	3.7	4.8	4.4	4.3	4.1	4.1	6.1	4.0
Hiking or nature walks	8.4	8.1	7.9	9.0	8.4	8.7	12.4	8.6	10.7	8.2
Camping	6.4	5.8	6.1	7.0	6.2	7.6	7.0	6.1	8.8	6.1
Off-road motorcycling or snowmobiling	9.5	10.8	9.0	11.0	9.8	9.1	12.1	9.3	10.7	11.2
Sightseeing or driving for pleasure	13.9	16.7	15.1	15.9	14.3	14.6	15.0	14.7	15.6	15.0
Snow skiing	4.2	4.9	5.4	3.7	3.9	4.2	2.5	4.5	4.2	3.7
Ice skating	5.7	5.8	6.2	6.6	6.4	6.4	9.5	5.8	7.0	5.7

Table 6.7.--MEDIAN DAYS OF PARTICIPATION BY UNIFORM PLANNING REGION AND POPULATION DENSITY

Activity	Total	Uniform planning region										People per sq. mile		
		Region one	Region two	Region three	Region four	Region five	Region six	Region seven	Region eight	Region nine	Region ten	Under 1,000	1,000-5,999	6,000 plus
Swimming	20.5	24.0	20.5	20.7	27.5	13.9	24.9	11.8	24.2	15.1	20.1	19.2	20.6	20.9
Picnicking	6.3	5.1	7.1	6.9	7.6	6.8	6.2	6.9	7.7	7.6	5.7	6.5	6.5	5.7
Boating, canoeing or waterskiing ...	3.5	3.6	3.4	4.4	4.2	3.7	3.8	2.7	4.1	3.6	3.3	3.8	3.7	3.1
Fishing	7.8	5.9	5.0	9.5	11.9	20.0	8.4	8.5	8.3	8.3	7.6	8.4	8.4	6.1
Hunting or sport shooting	10.3	8.9	7.0	7.4	19.5	11.3	11.1	13.4	7.6	12.2	10.7	9.8	11.3	8.5
Tennis	11.4	12.5	10.5	14.8	9.1	12.5	12.0	14.5	9.0	9.2	10.3	11.5	10.3	12.9
Golf or miniature golf	4.5	4.3	4.7	4.7	5.8	2.9	4.0	4.0	3.1	6.4	6.0	3.8	4.6	5.2
Basketball	18.2	20.4	14.5	22.3	10.2	16.2	18.1	9.7	38.2	10.1	19.7	15.1	18.9	19.4
Baseball or softball	13.8	15.9	12.2	16.6	8.1	14.0	14.0	16.9	13.1	14.3	12.6	12.8	14.3	13.8
Football	12.0	12.0	11.6	13.6	9.5	14.5	12.8	9.9	13.3	11.5	11.5	9.4	12.6	12.1
Street hockey	13.7	16.2	12.6	33.9	12.0	32.0	32.0	7.0	1.0	24.5	13.2	18.8	10.0	22.8
Bicycling	32.2	34.8	30.9	48.1	24.5	13.8	32.7	33.7	64.5	47.7	26.5	33.3	32.5	30.9
Horseback riding ..	4.0	3.5	3.9	2.9	3.6	2.5	2.3	5.1	5.3	8.4	4.8	5.2	3.3	4.6
Hiking or nature walks	8.4	7.9	8.6	9.1	18.7	7.8	7.5	9.0	13.0	9.6	7.8	8.9	9.2	7.1
Camping	6.4	5.2	4.5	4.4	4.0	8.0	6.6	5.4	8.0	9.7	6.7	6.1	6.9	5.6
Off-road motorcycling or snowmobiling	9.5	9.6	4.3	14.4	4.4	4.2	12.3	12.7	6.2	11.0	7.6	7.3	11.0	6.9
Sightseeing or driving for pleasure .	13.9	14.0	12.9	18.0	18.4	12.6	13.3	13.7	13.9	14.5	13.4	15.6	14.2	13.0
Snow skiing	4.2	2.5	3.9	10.0	6.4	6.2	15.5	2.4	10.5	7.9	4.2	4.0	6.5	3.2
Ice skating	5.7	5.4	6.8	7.7	8.7	6.2	4.1	4.0	5.9	9.8	5.1	7.0	5.8	4.5

Table 6.8.--MEDIAN DAYS OF INDOOR PARTICIPATION BY AGE AND SEX OF SUBJECT AND TOTAL FAMILY INCOME

	Swimming	Tennis	Basketball	Ice skating
Total	7.6	5.9	15.0	4.2
Age of subject of interview:				
5 - 9 years	12.8	3.5	42.0	5.0
10 - 19 years	7.2	5.3	16.6	6.0
20 - 29 years	8.2	10.5	13.3	3.8
30 - 44 years	4.5	6.4	7.9	2.6
45 - 64 years	7.2	3.3	4.3	3.8
65 plus	17.0	13.2		
Sex of subject:				
Male	7.8	4.5	19.7	4.8
Female	7.4	6.8	9.9	3.8
Total family income:				
Under $4,000	4.5	4.3	37.4	6.3
$4,000 - 6,999	9.8	4.5	20.2	1.9
$7,000 - 9,999	5.9	3.6	13.2	5.3
$10,000 - 14,999	7.3	4.7	13.8	3.5
$15,000 plus	7.9	8.5	15.1	4.5

Table 6.9.--MEDIAN DAYS OF INDOOR PARTICIPATION BY EMPLOYMENT AND EDUCATION OF SUBJECT, HOUSEHOLD SIZE, AND CAR OWNERSHIP

	Swimming	Tennis	Basketball	Ice skating
Total	7.6	5.9	15.0	4.2
Employment status of subject:				
Employed	7.4	5.2	14.5	3.9
Unemployed	4.2	12.0	20.3	12.0
Not in labor force	8.0	6.3	14.9	4.4
Education of subjects 20 or more years old:				
Up to 8 years	14.5		7.8	1.0
9 - 11 years	2.7	3.8	39.5	2.9
12 years	4.1	7.8	9.1	3.6
Some college	8.3	12.2	14.1	3.8
College graduate	8.4	5.3	8.7	2.5
Size of household:				
1 - 2 persons	7.7	11.0	8.9	3.3
3 - 4 persons	7.0	9.8	13.9	3.5
5 plus	8.1	3.7	17.3	5.1
Car ownership:				
Own a car	7.6	5.9	14.8	4.2
No car	7.0	7.0	29.9	12.0

Table 6.10.--MEDIAN DAYS OF INDOOR PARTICIPATION BY AGE, EDUCATION STATUS, AND RACE OF HEAD OF HOUSEHOLD

	Swimming	Tennis	Basketball	Ice skating
Total	7.6	5.0	15.0	4.2
Age of head of household:				
Up to 29 years	8.0	13.7	10.9	4.3
30 - 44 years	7.6	4.2	14.4	4.1
45 - 64 years	7.0	6.1	17.4	4.2
65 plus	17.0	3.5	10.3	5.3
Education of head:				
Up to 8 years	11.6	13.7	27.6	28.8
9 - 11 years	9.1	7.0	16.5	2.4
12 years	6.6	4.4	10.5	5.5
Some college	7.8	5.3	18.4	3.7
Employment status of head of household:				
Employed	7.9	5.7	15.3	4.1
Unemployed	3.7	12.0	12.8	7.8
Not in labor force ...	4.8	24.5	14.1	5.5
Race of head of household:				
White	7.5	6.7	13.9	4.2
Nonwhite	9.7	1.4	47.1	1.0

Table 6.11.--MEDIAN DAYS OF INDOOR PARTICIPATION BY ACTIVITIES PARTICIPATED IN DURING PREVIOUS YEAR

	Swimming	Tennis	Basketball	Ice skating
Total	7.6	5.9	15.0	4.2
Swimming	7.6	6.3	14.4	4.0
Picnicking	7.3	6.3	13.9	4.0
Boating, canoeing or waterskiing	7.5	6.9	12.4	4.6
Fishing	7.9	4.1	14.2	4.7
Hunting or sport-shooting	6.6	3.7	12.5	3.8
Horseback riding	7.1	4.5	14.8	4.2
Hiking or nature walks..	7.7	7.3	13.4	3.9
Camping	7.5	4.1	14.3	5.7
Off-road motorcycling or riding snowmobiles	5.1	4.5	15.6	5.8
Sightseeing or driving for pleasure..........	7.7	4.6	13.9	4.1
Tennis	8.5	5.9	15.4	3.8
Golf or miniature golf .	7.7	5.0	13.1	4.5
Basketball	6.9	4.3	15.0	4.5
Baseball or softball ...	8.0	4.2	15.1	4.7
Football	8.4	3.2	19.2	4.6
Street hockey	6.8	19.5	22.6	6.6
Bicycling	8.2	5.2	14.7	4.1
Snow skiing	8.6	12.6	17.6	3.2
Ice skating	7.6	6.0	14.1	4.2

Table 6.12.--MEDIAN DAYS OF INDOOR PARTICIPATION BY UNIFORM PLANNING REGION AND POPULATION DENSITY

	Swimming	Tennis	Basketball	Ice skating
Total	7.6	5.9	15.0	4.2
Region one	10.2	7.4	14.4	6.1
Region two	5.0	12.9	16.5	2.7
Region three	8.0	7.0	19.2	9.5
Region four	11.7		7.4	
Region five	7.5	42.8	16.6	1.4
Region six	6.4	3.8	17.6	3.6
Region seven	3.6	3.0	11.5	2.0
Region eight	25.7	2.3	13.0	19.5
Region nine	7.6	3.1	9.5	3.9
Region ten	7.2	5.3	15.3	3.9
People per sq. mile:				
Under 1,000	3.7	8.5	9.6	6.3
1,000 - 5,999	6.4	3.7	18.7	3.7
6,000 plus	10.3	8.3	14.2	4.1

Chapter 7.--MOST RECENT PARTICIPATION IN EACH ACTIVITY: CHARACTERISTICS OF OCCASION AND KIND OF PLACE

After the dialogue with the respondent to obtain estimates of the number of activity days for each activity participated in during the past year, a separate questionnaire or activity sheet was executed for each activity participated in dealing with the respondent's most recent participation in the activity. The following sequence of questions taken from the activity sheet questionnaire forms the basis for the material presented in this chapter:

Now, please think about the most recent time (you/subject's name) __Activity__ .

Was that in Pennsylvania?

Was that on a holiday weekend, regular weekend, or regular weekday?

Was that on a vacation, overnight trip, all-day outing, or a time when (you/subject's name) had no more than a few hours available?

Bicycling only--Did (you/subject's name) ride the bicycle from home?
(If the answer was Yes, interviewer was instructed to go to next activity)

Sightseeing or driving for pleasure (Interviewer was instructed to go to next activity)

What kind of place was that?

Boating only--Was that in a canoe or raft?

(If not a public facility) Is there a public tax-supported facility in your area where (you/subject's name) can __Activity__ ?

(If Yes) Why didn't (you/subject's name) go there?

If activity was done in respondent's own backyard, the interviewer was instructed to go to next activity.

When (you/subject's name) __Activity__ (Were you/was subject's name) inconvenienced or bothered by over-crowding?

To enable detailed classification of recreation participation by kind of place, interviewers were trained to probe sufficiently to determine type of ownership and, for certain activities, important physical characteristics of the place. Each interviewer was provided with a copy of the code list used to classify responses for kind of place. The list was set up for the interviewer to refer to during the interview. The interviewer continued probing until sufficient detail had been obtained to permit classification of the response in one of the established coding categories, if such detail was available. When children were interviewed, additional kind-of-place information frequently was obtained in the subsequent interviewing of the head of the household.

The procedure used placed an above-average burden on the interviewing process. However, had the questioning been completely spelled out in the questionnaire, it would have been necessary to have editions of the activity sheets specific to each activity, which would have caused extreme problems for the interviewer in managing the interview materials. The handling of interview materials was already highly complex, and it was better to place an additional burden on interviewer training and the interview process rather than further complicate the survey materials. Ongoing monitoring of interview calls enabled careful control of the procedure.

Whether activity was in Pennsylvania, type of day, and type of outing

For each of the 19 surveyed activities in which the respondent had participated in the past year he was asked whether the most recent occurrence was in Pennsylvania, whether it was on a holiday weekend, a regular weekend, or a regular weekday, and whether it was on a vacation, overnight trip, all-day outing, or at a time when the respondent had no more than a few hours available.

Summing the responses directly, without weighting, indicates the characteristics of participation in terms of the "typical" at-least-once-a-year participant. Weighting the responses by number of activity days and then summing indicates the characteristics of participation in terms of the "typical" recreation occasion.

Across all activities, the proportion of in-Pennsylvania responses was 89.0% for

participants and 93.0% for occasions. The activities with above-average in-Pennsylvania participation are picnicking, hunting or sport shooting, hiking or nature walks, off-road motorcycling or riding snowmobiles, tennis, golf or miniature golf, basketball, baseball or softball, football, street hockey, bicycling, and ice skating. The activities with above-average out-of-state participation are swimming, boating, canoeing or waterskiing, fishing, horseback riding, camping, sightseeing or driving for pleasure, and snow skiing. (3-001, 002)

Across all activities, 48.2% of participants participated on regular weekends and 45.5% on regular weekdays. 60.9% of recreation occasions were on regular week days. The activities with higher-than-average regular weekend participation are picnicking, boating, canoeing or waterskiing, horseback riding, hiking or nature walks, camping, sightseeing or driving for pleasure, snowskiing, and ice skating. The activities with greater-than-average participation on a regular week day are swimming, fishing, hunting, off-road motorcycling or riding snowmobiles, tennis, golf or miniature golf, basketball, baseball or softball, football, street hockey, and bicycling. The activities which show greater-than-average holiday weekend participation are swimming, picnicking, boating, canoeing or waterskiing, and camping. (3-001, 002)

Across all activities and all individuals, the most recent recreation experience occurred on an outing or occasion lasting no more than a few hours in 62.7% of the occasions and 75.8% of activity days.

Across all activities, 62.7% of participants participated on an occasion lasting no more than a few hours, 19.8% on an all-day outing, 9.8% on a vacation, and 7.7% on an overnight trip. 75.8% of recreation occasions lasted no more than a few hours, 13.0% were all-day outings, 5.7% were on a vacation, and 4.3% were on an overnight trip. The activities which have a few-hours percentage which is higher than the average across all activities are swimming, horseback riding, off-road motorcycling or snowmobiling, tennis, golf or miniature golf, basketball, baseball or softball, football, street hockey, bicycling, and ice skating. The activities which show larger-than-average all-day-outing percentages are picnicking, boating, canoeing or waterskiing, fishing, hunting or sport shooting, sightseeing or driving for pleasure, and snowskiing. The activities with larger-than-average

overnight-trip percentages are boating, canoeing or waterskiing, fishing, hunting or sport shooting, hiking or nature walks, camping, and snowskiing. The activities with higher-than-average vacation percentages are swimming, boating, canoeing or waterskiing, fishing, hiking or nature walks, camping, sightseeing or driving for pleasure, and golf or miniature golf. (3-001, 002)

Whether bicycle was ridden from home

Each individual who bicycled was asked for the most recent time the individual bicycled whether the bicycle was ridden from home. The bicycle was ridden from home by 92.8% of the cyclists, or in 98.4% of the bicycling occasions. (3-003)

Use of canoe or raft

For their most recent boating experience participants were asked whether they used a canoe or raft. Of those who responded, 26.3% of participants reported that the activity involved a canoe or raft. The corresponding fraction for boating occasions is 21.0%. For readers having access to the computer printouts, it may be noted that the canoe-or-raft question was added after the survey was under way, which accounts for the relatively high percentage, 19.9%, in the undetermined category. (3-004)

Kind of place, ownership

For each activity participated in at least once in the past year the respondent was asked to think about the most recent time he participated in the activity and describe the kind of place at which the activity occurred. Probing was used to permit a classification of places by type of ownership among public, private, commercial, and nonprofit or quasi-public, and for certain activities by the physical characteristics of the facility or place. The distinction between private and commercial was on the basis of whether the facility was open to the general public for the payment of a fee. (3-005, 006)

Kind of place data were not obtained for participation in sightseeing or driving for pleasure nor for bicycling participation in which the bicycle was ridden from home. The following discussion deals only with the 17 remaining activities.

Across the 17 activities, 51.0% of participants participated at public facilities, 34.1% at private places, 12.9% at commercial places, and 2.0% at nonprofit or quasi-public places. In terms of activity days, the corresponding percentages are 48.4% for public, 41.3% for private, 8.2% for commercial, and 2.1% for nonprofit or quasi-public. The activities for which the public percentages (in terms of participants) are higher-than-average are picnicking, boating, canoeing or waterskiing, fishing, hiking or nature walks, tennis, basketball, and baseball or softball. The activities with higher-than-average private percentages are swimming, hunting or sport shooting, horseback riding, off-road motorcycling or riding snowmobiles, basketball, baseball or softball, football, and street hockey. The activities which depend heavily on commercial places are horseback riding, camping, golf or miniature golf, snowskiing, and ice skating. The activities for which nonprofit or quasi-public places have greater-than-average importance are swimming, hiking or nature walks, camping, and basketball. (3-005, 006)

Within the public category, places were further classified into public school or university, neighborhood parks, municipal or county parks, state parks or lands, and national parks or lands. The activities for which public schools or universities have above-average importance (in terms of participants) are tennis, basketball, baseball or softball, football, and street hockey. Neighborhood parks have above-average importance for hiking or nature walks, tennis, basketball, baseball or softball, football, and street hockey. Municipal or county parks have above-average importance for swimming, picnicking, boating, canoeing or waterskiing, fishing, tennis, baseball or softball, and ice skating. State parks or lands figure importantly in picnicking, boating, canoeing or waterskiing, fishing, hunting or sport shooting, hiking or nature walks, and camping. National parks or lands show the same activities as state parks with the addition of horseback riding. (3-005, 006)

The private facilities or places were divided into seven categories: 1) the subject's home, lands, or vacation home, and streets by the subject's home, 2) home or lands of a private individual other than the subject, 3) a private club, for example, swim club, country club, yacht club, 4) a private camp, day or overnight, 5) an apartment complex, a housing development, or mobile home park, 6) a private school or university, 7) lands or holdings of a business corporation or a public utility. The subject's home, etc. category

accounted for 11.7% of the most recent recreation occasions. This figure was exceeded by swimming, hunting or sport shooting, horseback riding, hiking or nature walks, off-road motorcycling or riding snowmobiles, basketball, baseball or softball, football, and street hockey. The home or lands of another private individual accounted for 13.5% of the most recent recreation instances. This type of place had greater-than-average importance for swimming, picnicking, hunting or sport shooting, horseback riding, off-road motorcycling or riding snowmobiles, football, street hockey, and ice skating. (3-005, 006)

The private club category accounted for 5.7% of the most recent occasions, which percent was exceeded by swimming, boating, canoeing or waterskiing, hunting or sport shooting, tennis and golf or miniature golf. Private camps accounted for 1.2% of most recent occasions. This category has above-average importance for hunting or sport shooting, hiking or nature walks, camping, and off-road motorcycling or riding snowmobiles.

Apartment complexes accounted for 0.4% of most recent occasions. This category has above-average importance for swimming and tennis. Private schools or universities accounted for 0.7% and have above-average importance for tennis, basketball, baseball or softball, football, and ice skating. (3-005, 006)

Lands or holdings of businesses or public utilities accounted for 0.7%. This category has above-average importance for boating, canoeing or waterskiing, fishing, hunting or sport shooting, camping, off-road motorcycling or riding snowmobiles, baseball or softball, and ice skating. (3-005, 006)

In the commercial category, three classes were distinguished: 1) health spas or commercial athletic clubs, 2) resort or overnight hotels or motels, 3) commercial golf courses, skiing areas, camp grounds, stables, etc. The last is by far the most important, accounting for 84.8% of all commercial places, which in turn accounted for 12.9% of most recent recreation occasions. The last category has above-average importance for horseback riding, camping, golf or miniature golf, snow skiing, and ice skating.

The next most important commercial facility is the resort hotel or the overnight hotel or motel, which accounted for 1.9% of most recent occasions. This type of place assumes above-average importance for swimming, boating, canoeing or waterskiing,

horseback riding, off-road motorcycling or riding snowmobiles, and snow skiing. Health spas or commercial athletic clubs accounted for only 0.1% of most recent occasions. (3-005, 006)

The nonprofit, quasi-public category was separated into: 1) camps, sponsored by a nonprofit agency, day or overnight, which accounted for 0.6%, 2) YMCA, YWCA, YMHA, YWHA, Boy's Club, Little League, etc., which accounted for 0.6%, 3) church, synagogue, other religious facilities, which accounted for 0.6%, and 4) historical or cultural society, zoo, botanical garden, etc., which accounted for 0.1%. (3-005, 006)

In the ownership undetermined category the most important sub-category was "out in the country, up in the mountains, out in the woods", which accounted for 0.9% of most recent instances. The recreation activities reported for this type of place are hunting or sport shooting, hiking or nature walks, camping, and off-road motorcycling or riding snowmobiles. (3-005, 006)

Physical characteristics of place

For the activities of swimming, picnicking, boating, canoeing or waterskiing, fishing, golf or miniature golf, street hockey, and ice skating an effort was made to obtain detail concerning the physical characteristics of the place at which the most recent participation occurred. As before, the results are presented both in unweighted form, indicating the characteristics in terms of the "typical" at-least-once-a-year participant, and weighted by number of activity days, indicating the characteristics in terms of the "typical" recreation occasion.

For swimming, it was determined whether the most recent participation was in a pool and, if not, whether it was in fresh or salt water. In terms of participants, 64.2% swam in a pool on the most recent occasion, 25.2% in a lake, pond, river, or stream, and 10.6% in an ocean or bay. 74.4% of swimming activity days were in a pool, 18.1% in a lake, pond, river, or stream, and 7.5% in an ocean or bay. (3-007, 5-007)

For picnicking, it was determined whether or not the most recent participation occurred at a roadside picnic area. In terms of participants, 98.4% used nonroadside areas

and 1.6% used roadside areas. 98.6% of picnicking activity days occurred at nonroadside areas and 1.4% at roadside areas. (3-007, 5-007)

For boating, canoeing or waterskiing, the distinction was made between fresh and salt water. In terms of participants, 85.3% boated in fresh water, 14.7% in salt water. 80.7% of boating activity days were in fresh water and 19.3% in salt water. (3-007, 5-007)

For fishing, the distinction was made between fishing in fresh or salt water and with or without a boat. In terms of participants, 89.0% fished in fresh water, 11.0% in salt water; 64.8% fished without a boat, 35.2% with a boat. 90.7% of fishing activity days were in fresh water, 9.3% in salt water. 58.8% of fishing activity days were without a boat, 41.2% with a boat. (3-007, 5-007)

For street hockey, 82.7% of participants played in a nonrecreational area such as a street, driveway, or parking lot and 17.3% played in a recreational area such as a playground, tennis court, or basketball court. (3-007)

For ice skating, 42.5% of participants used an artificial skating rink and 57.5% used a natural surface such as a frozen lake or pond. (3-008)

Availability of public tax-supported facility when one was not used

For the 17 activities other than bicycling and sightseeing or driving for pleasure, participants were asked to describe the kind of place where their participation occurred. If the place apparently was not a public facility, they were asked if there was a public tax-supported facility in their area where they could have engaged in the activity.

Across the 17 activities, 51.0% of participants did use a public tax-supported facility, 23.9% had a public facility available but did not use it, and 25.1% did not have access to a public facility. The corresponding percentages in terms of activity days rather than participants are 48.4%, 26.3%, and 25.3%, respectively. In calculating the percentages, the don't know and no answer responses were distributed in proportion to the knowledgeable responses.

The percentage of participants who did not have access to a public facility may be

viewed as the fraction of participants who might be additionally reached by expansion of public facilities. It is in the nature of a ceiling measure. The activities with higher-than-average percentages of participants with no access to a public facility are horseback riding, 77.0%; golf or miniature golf, 73.3%; off-road motorcycling or riding snowmobiles, 69.7%; snowskiing, 67.0%; hunting or sport shooting, 47.3%; street hockey, 43.2%; ice skating, 33.8%; camping, 29.0%; and boating, canoeing or waterskiing, 27.5%. (3-009, 010)

Note that the percentages above give the same weight to each participant without regard to the extent of his participation, and the percentages therefore reflect more closely the situation for the occasional rather than the frequent participant. Also, observe that even though an area may have a public facility available, the capacity of the facility may be inadequate to meet the needs of the population of participants in the area.

The activities with higher-than-average percentages of participants who used non-public facilities are golf or miniature golf, 89.5%; snow skiing, 89.2%; horseback riding, 88.9%; off-road motorcycling or riding snowmobiles, 76.8%: hunting or sport shooting, 70.3%; street hockey, 62.5%; swimming, 56.0%; camping, 54.8%; football, 53.2%; and ice skating, 50.7%. (3-005, 006)

Reasons for not using public tax-supported facilities

Respondents who had not used a public tax-supported facility in their most recent participation in an activity (other than bicycling and sightseeing or driving for pleasure), but who said that such a facility was available in their area, were asked why they had not used the public tax-supported facility.

The responses most frequently given were: invited elsewhere, visiting or went with family or friends, 18.1%; prefer a private home or club for reasons of membership or privacy, 14.9%; were away on vacation, wanted to go away or wanted variety, 12.0%; the place is too far, inconvenient, there is no transportation to the place, 15.6%; the place is too crowded, a reservation is necessary, 9.1%; simply don't like it there, it is not as nice a place, 6.4%; and no particular reason, just didn't feel like it, etc., 7.6%. (3-011, 012)

The activities for which the proportion of respondents who said they prefer a private

home or club is greater than average are swimming, hunting or sport shooting, horseback riding, off-road motorcycling or riding snowmobiles, tennis, basketball, baseball or softball, and street hockey. The activities for which personal invitations or visiting have above average importance are picnicking, baseball or softball, and street hockey. (3-011, 012) The activities for which there is greater-than-average desire to go away are picnicking, boating, canoeing or waterskiing, fishing, hiking or nature walks, camping, and snow skiing. The activities which show above-average objections to crowding or needing a reservation are swimming, camping, tennis, and ice skating. The too-crowded response is approximately three times as large for tennis as the average across all activities. The just-don't-like-it-there, not-as-nice response has above average importance for swimming, picnicking, fishing, hunting or sport shooting, horseback riding, hiking or nature walks, camping, golf or miniature golf, snow skiing, and ice skating.

A way to further explore the most important factors limiting the use of public facilities is to list for each activity the reasons sufficient to account for at least half of the responses for the activity. For swimming, the principal reasons are: prefer private home or club, etc., 22.2%; too crowded or need a reservation, 13.9%; invited elsewhere, visiting family or friends, 13.4%; and the public place is too far, inconvenient, or no transportation, 14.3%. (3-011, 012)

For picnicking the major reasons for not using a tax-supported facility are: invited elsewhere or visiting family or friends, 41.4%; and on a vacation or outing or wanted to go away, 13.2%.(3-011)

For boating: on vacation or wanting to go away for variety, 19.4%; invited elsewhere, or visiting with family or friends, 13.7%; prefer private home or club, 10.0%; need to go where equipment may be rented, borrowed or stored, 9.0%. (3-011)

For fishing the main reasons are: on a vacation or outing, etc., 21.6%; the public place is too far or inconvenient, 13.6%; invitations elsewhere, 8.8%; don't like it there, public place not as nice, 7.8%. (3-011)

For hunting or sport shooting the main reasons are: prefer private home or club, 19.6%; public place too far or inconvenient, 18.3%; invited elsewhere, visiting with family

or friends, 14.3%. (3-011)

For horseback riding the main reasons for not utilizing a public facility are: too expensive, 23.2%; prefer private home or club, 20.2%; invited elsewhere, visiting, went with family or friends, 17.2%; public place too far, inconvenient, 15.2%. (3-011)

Main reasons for not utilizing public facilities for hiking or nature walks are: the public place is too far, inconvenient, 22.8%; on a vacation or outing, 18.2%; prefer private home or club, 13.1%. (3-011)

The main reasons for not using public facilities for camping are: on vacation, 28.9%; went with an organized group, 11.4%; the public place is too crowded, need a reservation, 10.6%. (3-011)

For motorcycling or riding snowmobiles the major reasons for not utilizing a public facility are: prefer private home or club, 18.1%; the public place is too far or inconvenient, 15.7%; needed to go where equipment may be rented, borrowed, or stored, 14.5%; invited elsewhere, visiting, or went with family or friends, 13.3%. (3-011)

For tennis the main reasons for not using public places are: too crowded, 26.4%; prefer private home or club, 17.0%; public place is too far, inconvenient, or there is no transportation, 15.2%. (3-012)

For golf or miniature golf the main reasons for not using public places are: on vacation, 24.3%; prefers a club, 13.5%; the public place is not as nice, 10.8%; invited elsewhere, visiting, went with family or friends, 8.4%. (3-012)

The main reasons for not using public facilities for basketball are: public place is too far or inconvenient, 27.5%; prefer private home or club, 25.8%. (3-012)

For baseball or softball: invited elsewhere, visiting, went with family or friends, 19.0%; the public place is too far, inconvenient, 18.9%; prefer private home or club, 17.6%. (3-012)

The reasons for not using public facilities for football are: the public place is too far, inconvenient, 34.2%; invited elsewhere, visiting, went with family or friends, 15.6%; prefer private home or club, 13.4%. (3-012)

For street hockey: the public place is too far or inconvenient, 26.8%; visiting with family or friends, 25.0%. (3-012)

For snow skiing the two main reasons are: the public place is too far or inconvenient, 27.4%; on vacation or wanted to go away, 24.2%. (3-012)

For ice skating the principal reasons for not using public facilities are: the public place is too far or inconvenient, 21.3%; public place is too crowded, 15.5%; invited elsewhere, visiting, or went with family or friends, 13.2%. (3-012)

Overcrowding of recreation facilities

For each activity in which he had participated (other than bicycling and sightseeing or driving for pleasure), the respondent was asked to describe the kind of place at which his most recent participation in the activity had occurred. If he had participated away from his own home, he was asked whether he had been inconvenienced or bothered by overcrowding.

Across the 17 activities, 12.3% of respondents who participated away from home reported that they were inconvenienced or bothered by overcrowding. The fractions of respondents reporting overcrowding are greatest for tennis, 37.4%; snow skiing, 34.6%; ice skating, 25.9%; golf or miniature golf, 22.4%; and swimming, 13.4%. The pressure on existing facilities in tennis, snow skiing, ice skating, and golf or miniature golf and the degree to which growth in participation in these activities is limited by existing facilities is clearly evident. (3-013, 014)

Table 7.1.--USE AND KNOWN AVAILABILITY OF PUBLIC RECREATION FACILITIES IN MOST RECENT PARTICIPATION

	Total participants	Used public facility	Did not use public facility		
			Total	Public facility available	Public facility not available
All activities	100.0	51.0	49.0	23.9	25.1
Swimming	100.0	44.0	56.0	33.0	23.0
Picnicking	100.0	66.5	33.5	24.7	8.8
Boating, canoeing or waterskiing	100.0	59.9	40.1	14.8	25.3
Fishing	100.0	65.2	34.8	17.9	16.9
Hunting or sport shooting	100.0	29.7	70.3	24.1	46.2
Horseback riding	100.0	11.1	88.9	12.1	76.8
Hiking or nature walks ..	100.0	62.7	37.3	20.1	17.2
Camping	100.0	45.2	54.8	27.0	27.8
Off-road motorcycling or riding snowmobiles	100.0	23.2	76.8	9.7	67.1
Tennis	100.0	75.1	24.9	18.8	6.1
Golf or miniature golf ..	100.0	10.5	89.5	16.4	73.1
Basketball	100.0	55.2	44.8	31.3	13.5
Baseball or softball	100.0	59.5	40.5	28.6	11.9
Football	100.0	46.8	53.2	34.9	18.3
Street hockey	100.0	37.5	62.5	19.3	43.2
Snow skiing	100.0	10.8	89.2	22.4	66.8
Ice skating	100.0	49.3	50.7	17.6	33.1

Chapter 8.--THE EFFECT OF TRANSPORTATION AND TRAVEL TIME ON RECREATION

For all activities except sightseeing or driving for pleasure and bicycling where the respondent rode the bike from home, respondents were questioned as to the means of transportation used in connection with the most recent participation in the activity, the length of time required to get from home to the place where the participation occurred, the availability of other places nearby, and the respondent's attitudes toward public transportation.

More specifically, respondents whose most recent participation in an activity had occurred away from home were asked the following questions:

> Now, please think about the most recent time you ACTIVITY . . . .
>
> What means of transportation did you use to get from home to the place where you ACTIVITY?
>
> How long did it take to get from home to the place where you ACTIVITY?
>
> (If place more than 10 minutes away) If the place where you ACTIVITY were only half as far away as it actually is, would you ACTIVITY
>
> much more often,
> slightly more often, or
> about as often as now?
>
> Is there any place closer to home where you could have ACTIVITY?
>
> (If yes) What kind of place for ACTIVITY is closest to home?
>
> How long does it take to get there?
> Why didn't you go there?
>
> (If public transportation not used) Is there public transportation available to the place where you ACTIVITY?
>
> (If yes) What prevented you from using it?
>
> (If no or don't know) If public transportation were made available, would you use it? (If yes) If public transportation were made available would you ACTIVITY
>
> much more often,
> slightly more often, or
> about as often as now?

To determine what kind of place for the activity is nearer to home than the one actually visited, the same kind of probing process was employed to obtain type of ownership and physical characteristics of the facility as was used for the place where the participation actually occurred.

Means of transportation used for recreation away from home

Across all activities, the automobile is overwhelmingly the most frequently used means of transportation in connection with recreation away from home. An automobile, camper, or truck was used for 78.7% of most recent recreation experiences away from home, walking for 14.7%, bus, rail, or mass transit for 2.5%, and a bicycle for 2.6%. Excluding walking, an automobile, camper, or truck accounts for fully 92.2% of most recent experiences.

Activities with greater-than-average dependence on the automobile are: picnicking, 94.3%; boating, canoeing or waterskiing, 95.2%; fishing, 86.1%; hunting or sport shooting, 87.0%; horseback riding, 84.5%; camping, 93.6%; golf or miniature golf, 93.0%; and snow skiing, 80.8%. Activities for which walking had greater-than-average importance are: hiking or nature walks, 25.3%; tennis, 24.9%; basketball, 44.7%; baseball or softball, 33.3%; football, 42.8%; street hockey, 53.1%; and ice skating, 26.3%. (3-015, 016)

Bicycles had greater-than-average prominence in connection with: swimming, 3.8%; motorcycling or riding snowmobiles, 7.5%; tennis, 8.8%; basketball, 6.2%; baseball or softball, 5.8%; football, 5.9%; and street hockey, 14.8%. Activities for which bus, rail, or mass transit assumed greater-than-average importance are: horseback riding, 4.9%; camping, 2.6%; basketball, 7.7%; baseball or softball, 4.2%; football, 6.1%; and snow skiing, 13.6%. (3-015, 016)

Travel time one-way

For each activity in which the respondent had participated in the past year, if his most recent participation had occurred away from home the respondent was questioned as to the travel time one-way required to get from home to the place where the participation occurred. The median travel time across all activities is 24.8 minutes. Activities which

generally are participated in closer to home are: swimming, with a median of 15.5 minutes; off-road motorcycling or riding snowmobiles, 15.0 minutes; tennis, 8.6 minutes; golf or miniature golf, 18.0 minutes; basketball, 6.3; baseball or softball, 9.4; football, 6.4; street hockey, 6.2; and ice skating, 13.6 minutes. Activities performed at greater-than-average distances are: picnicking, 30.3 minutes; boating, canoeing or waterskiing, 59.9 minutes; fishing, 30.4; hunting or sport shooting, 30.0; horseback riding, 29.8; hiking or nature walks, 29.9; camping, 94.6; and snow skiing, 60.2. (3-017, 018)

Effect of proximity of facility on recreation participation

If the respondent's most recent participation in an activity had occurred away from home, he was asked how long it took to get from home to the place where had participated. If it took more than 15 minutes he was asked if the place where he went were only half as far away as it actually is, would he participate much more often, slightly more often, or about as often as now. Across all activities (excluding sightseeing or driving for pleasure and bicycling from home), 19.7% of participants said they would participate much more often and 18.7% said they would participate slightly more often than now.

Activities for which distance of facilities has a greater-than-average effect in curtailing participation are swimming, boating, canoeing or waterskiing, fishing, horseback riding, street hockey, snow skiing, and ice skating. Of all the activities, snow skiing and street hockey are the most constrained by distance. For snow skiing, 65.9% of those who travelled 15 minutes or more say they would ski more often if the place were half as far away. The percentage for street hockey, 62.8%, probably does not reflect a scarcity of places where street hockey can be played but rather the distance that one must travel in order to find a group with whom to play street hockey. The two activities next most constrained by distance considerations are horseback riding, for which 53.1% reported that they would participate more often, and ice skating, 50.4%. Other activities with greater-than-average distance curtailment are swimming, 45.1%, boating, canoeing or waterskiing, 42.2%, and fishing, 39.1%. The fraction for tennis is below average, 35.0%, indicating that distance is not an above average constraint on tennis participation. For tennis, the important constraint is the unavailability of uncrowded courts rather than excessive distance

of the courts. (3-019, 020)

Availability of a place closer to home than the one used

If the respondent's most recent participation in an activity had occurred away from home, he was asked if there was a place where he could have participated which was closer to home than the place actually used. Across all activities (excluding sightseeing or driving for pleasure and bicycling from home), 42.1% of participants reported that they knew of a place closer to home where they could have participated in the activity.

Activities which show a greater-than-average tendency for bypassing nearby places are swimming, where 51.5% of participants reported they knew of a place closer to home; picnicking, 57.2%; fishing, 49.1%; hunting or sport shooting, 46.2%; hiking or nature walks, 43.6%; and camping, 51.7%. Across all activities, 53.4% of participants reported that there was no place closer to home where they could have gone to participate in the activity. Activities which show a greater-than-average tendency for participation at the nearest place are horseback riding, 68.5%; off-road motorcycling or riding snowmobiles, 67.6%; tennis, 73.3%; golf or miniature golf, 67.1%; basketball, 66.0%; baseball or softball, 62.5%; football, 64.3%; street hockey, 74.5%; snow skiing, 58.7%; and ice skating, 78.7%. (3-021, 022)

Place nearest home not used, ownership

If the respondent did not use the place closest to home for the most recent participation in an activity, he was questioned as to whether there was a place closer to home where he could have engaged in the activity, and what kind of place it was. Across all activities, (excluding sightseeing and driving for pleasure and bicycling from home), public places were bypassed by 54.9% of participants; private places by 25.5%; commercial places by 14.5%; and nonprofit or quasi-public places by 2.4%.

Activities which show a higher-than-average percentage of participants bypassing public places are picnicking, 64.8%; boating, canoeing or waterskiing, 57.2%; fishing, 63.4%; hiking or nature walks, 65.5%; tennis, 67.3%; basketball, 65.2%; and baseball or softball, 65.7%. A higher-than-average percentage of participants bypassing public

facilities for an activity indicates that the activity is relatively well-supplied with public facilities compared to other activities. Participants must have public facilities nearby before they can bypass them. It does not indicate, however, that the activity is adequately supplied with public facilities. Tennis, for example, has the highest percentage of participants who bypassed a public facility. The high percentage reflects the fact that a high proportion of individuals have a public tennis court near their home, but it also reflects the fact that heavy overcrowding of tennis courts forces participants to use more distant or non-public facilities. Activities with a lower-than-average percentage of public places bypassed and which therefore may be viewed as having a below-average supply of public facilities relative to other activities are snow skiing, 7.5%; golf or miniature golf, 9.3%; horseback riding, 14.4%; off-road motorcycling or riding snowmobiles, 30.7%; street hockey, 38.2%; camping, 40.5%; and hunting or sport shooting, 42.4%.

Activities which are relatively well-supplied compared to other activities by public school or university facilities are basketball, tennis, football, and baseball or softball. Activities which are relatively well-supplied compared to other activities by neighborhood parks are baseball or softball, basketball, tennis, and football. Activities which are relatively well-supplied by municipal or county parks are picnicking, boating, canoeing or waterskiing, fishing, and tennis. Activities which are relatively well-supplied by state park facilities are picnicking, boating, canoeing or waterskiing, fishing, hunting or sport shooting, hiking or nature walks, and camping. Activities which are relatively well-supplied by national park facilities are boating, canoeing or waterskiing, hunting or sport shooting, horseback riding, hiking or nature walks, and camping.

Activities which are relatively well-supplied compared to other activities by private facilities are swimming, hunting or sport shooting, horseback riding, off-road motorcycling or riding snowmobiles, basketball, baseball or softball, football, street hockey, and ice skating. Recall that the definition of private facilities does not include commercial facilities. Activities for which participants' homes, lands, or vacation homes have relatively more importance than for other activities are boating, canoeing or waterskiing, hunting or sport shooting, hiking or nature walks, camping, basketball, and football. The homes or lands of private individuals other than the interview subject have above-average importance

for swimming, picnicking, hunting or sport shooting, horseback riding, off-road motorcycling or riding snowmobiles, basketball, baseball or softball, football, street hockey, and ice skating. Private clubs have above-average importance for swimming, boating, canoeing or waterskiing, hunting or sport shooting, tennis, and golf or miniature golf. Private camps are relatively more important for hunting or sport shooting, horseback riding, hiking or nature walks, and camping than for other activities. Apartment complexes or housing developments are important for swimming, tennis, basketball, and baseball or softball. Private schools or universities are important for tennis, basketball, baseball or softball, and football. Lands or holdings of corporations or utilities are important for boating, canoeing or waterskiing, fishing, hunting or sport shooting, horseback riding, camping, off-road motorcycling or riding snowmobiles, football, and ice skating.

Activities which are relatively well-supplied compared to other activities by commercial facilities are horseback riding, camping, golf or miniature golf, snow skiing, and ice skating. In the commercial category, health spas and commercial athletic clubs are relatively more important for swimming and baseball or softball. Resorts, overnight hotels, and motels are more important for swimming, horseback riding, off-road motorcycling or riding snowmobiles, tennis, golf or miniature golf, street hockey, and snow skiing than for other activities. Commercial facilities specifically for recreation activities have above-average importance for horseback riding, camping, golf or miniature golf, snow skiing, and ice skating.

Nonprofit or quasi-public facilities are more important for swimming, hiking or nature walks, camping, and basketball than for other activities. (3-023, 024)

Place nearest home not used, physical characteristics

Among swimmers who did not use the place for swimming closest to their home, 48.3% of those responding said the nearest place was a pool, 31.8% said it was a lake, pond, river, or stream, and 20.0% said it was an ocean or bay. Note that the percentages are unweighted by activity days and therefore reflect the situation of the "typical" swimmer rather than the "typical" swimming participation.

Among fishing participants who did not use the nearest place for fishing, for 86.5% the nearest place was fresh water and for 13.5% it was salt water; for 57.0% it was a place for fishing without a boat and for 43.0% it was a place for fishing with a boat.

Among golfers who bypassed the place for golf or miniature golf nearest to home, for 49.5% the nearest place was a regulation golf course and for 50.2% the nearest place was a miniature golf course, driving range, or par three course.

Among ice skaters who did not use the nearest place for skating, for 50.0% the nearest place was a skating rink and for 50.0% the nearest place was a frozen natural surface. (3-025, 026)

Time required to reach nearest place if not used

Participants who did not use the place nearest to home were asked how long it takes to travel one-way from home to the place which is nearest to home. Across all activities (excluding sightseeing or driving for pleasure and bicycling from home), the median time is 5.4 minutes. Activities for which the median is greater than 5.4 minutes are picnicking, boating, fishing, hunting, horseback riding, hiking, camping, golf, and snow skiing. Activities for which the median is less than 5.4 minutes are swimming, off-road motorcycling or riding snowmobiles, tennis, basketball, baseball, football, street hockey, and ice skating. The longest median time is for snow skiing, 28.7 minutes. (3-027, 028)

Reasons for not using place nearest to home

The main reasons why respondents did not use the places nearest to home are: were on a vacation or outing, wanted to go away, or wanted variety, 31.4%; were invited elsewhere, visiting, or went with family or friends, 19.8%; don't like the nearest place, it is not as nice, 14.3%; nearest place is too crowded, a reservation is necessary, 11.7%; reasons of privacy or exclusivity, 5.9%; the facility is inappropriate for specific forms of an activity, 4.9%; the facility is lacking in other desired activities, 4.2%. (3-029, 030)

The vacation or outing reason for using a more distant facility figures most prominently for boating, canoeing or waterskiing, fishing, hiking or nature walks, camping, golf or miniature golf, and snow skiing. Invitations, visiting, or accompanying family or friends is most important for picnicking, horseback riding, off-road motorcycling or riding snowmobiles, basketball, baseball or softball, football, and street hockey. The fact that the nearby place is not as nice as the more distant place is important for picnicking, fishing,

hunting or sport shooting, hiking or nature walks, off-road motorcycling or riding snowmobiles, basketball, and snow skiing. That the nearby place is too crowded or a reservation is necessary is important for tennis, 35.0%; swimming, 21.0%; ice skating, 21.1%; and football, 12.4%. Reasons of exclusivity and privacy have above-average importance for swimming, hunting or sport shooting, horseback riding, tennis, and golf or miniature golf. The facility being inappropriate for the specific form of the activity is important for boating, canoeing or waterskiing, fishing, hunting or sport shooting, horseback riding, basketball, street hockey, snow skiing and ice skating. (3-029, 030)

Availability of public transportation

For the most recent occasion for each activity (excluding sightseeing or driving for pleasure and bicycling from home), respondents who did not use public transportation to get to the place where they participated were asked whether public transportation was available to the place where they participated. Across all activities, 15.2% of respondents who did not use public transportation reported that public transportation was available. The percentage was exceeded for swimming, 20.9%; picnicking, 17.0%; tennis, 19.6%; golf or miniature golf, 18.6%; basketball, 16.5%; football, 18.8%; and street hockey, 18.5%. (3-031, 032)

The number of participants who did not use public transportation but reported that it was available taken as a percentage of all participants is 10.4%. The percentage may be regarded as a ceiling on possible increases in usage of public transportation in recreation under current levels of availability of public transportation.

Reasons for not using public transportation

The reasons recreation participants do not use public transportation where it is available are: the car is more convenient, 44.2%; public transportation is too inconvenient, 18.6%; the place is too close to justify using public transportation, 9.6%; went as a group, 5.6%; public transportation is too slow, 4.5%; public transportation is too irregular, too undependable, too infrequent, 2.6%; it is too expensive, 2.6%.

The response that the place is too close to justify the use of public transportation is greater than average for swimming, 10.3%; tennis, 24.9%; basketball, 29.4%; baseball or

softball, 18.8%; football, 22.5%; and street hockey, 36.7%. Across all activities the highest too-inconvenient response was for golf or miniature golf, 26.7% compared to the average across all activities of 18.6%. The car-more-convenient responses were highest for hunting or sport shooting, 57.6%; picnicking, 56.4%; and fishing, 53.4% compared to the average across all activities of 44.2%. (3-033, 034)

Willingness to use public transportation if made available and effect on recreation participation

If the respondent did not use public transportation, and if the respondent said that public transportation was not available or that he did not know whether or not it was available, he was asked "If public transportation were made available, would you use it?" Across all activities (excluding sightseeing or driving for pleasure and bicycling from home), 22.1% said that they would use public transportation if it were made available. The percentage is exceeded for swimming, 29.0%; picnicking, 27.3%; boating, canoeing or waterskiing, 23.8%; horseback riding, 26.9%; golf or miniature golf, 24.1%; street hockey, 29.5%; snow skiing, 27.2%; and ice skating, 26.5%. (3-035, 036)

As a percentage of all participants, the fraction who report that they would use public transportation if it were made available is 12.8%. The activities with a higher percentage are swimming, 19.7%; picnicking, 21.3%; boating, canoeing or waterskiing, 19.3%; fishing, 17.6%; horseback riding, 18.9%; camping, 13.5%; tennis, 16.6%; golf or miniature golf, 18.8%; snow skiing, 19.2%; and ice skating, 20.6%. In interpreting these figures, recall that the main reasons for not using public transportation relate to its inconvenience relative to a car. Making public transportation available to all those who said they would use it if it were made available would probably imply uneconomical scheduling. (3-035, 036)

If the respondent reported that he did not use public transportation, none was available or its availability was unknown, and that he would use it if it were made available, he was asked whether he would then participate in the activity much more often, slightly more often, or about as often as now. Across all activities and as a percentage of all participants, the fraction of people who report they would participate more often is 8.0%; the fraction who would participate much more often if public transportation were made available

is 3.9%. Activities for which a greater-than-average fraction of participants would participate more often if public transportation were made available are swimming, 11.8%; picnicking, 12.1%; boating, canoeing or waterskiing, 12.2%; fishing, 11.3%; horseback riding, 14.4%; hiking or nature walks, 8.9%; camping, 8.2%; tennis, 10.5%; golf or miniature golf, 10.8%; snow skiing, 14.6%; and ice skating, 15.0%. The activities for which a larger fraction than the overall average of 3.9% would participate much more often are swimming, 6.8%; picnicking, 5.6%; boating, canoeing or waterskiing, 4.6%; fishing, 6.0%; horseback riding, 10.4%; hiking or nature walks, 4.1%; camping, 4.2%; tennis, 5.6%; golf or miniature golf, 4.8%; snow skiing, 10.3%; and ice skating, 6.1%. It would appear, therefore, that except for hunting or sport shooting, off-road motorcycling or riding snowmobiles, and the local playground sports, a noticeable increase in participation could be obtained by making public transportation available where it is not now available, or making its availability better known. Recall that for each of the surveyed activities the fraction of participants among noncar-owning households is dramatically lower than for car-owning households. (3-037, 038)

Chapter 9.--USE OF PUBLIC SCHOOL RECREATIONAL FACILITIES

For tennis, basketball, baseball or softball, and football, public schools constitute the single most important type of recreational facility, except for private homes in the case of football.

All respondents were asked the following question: "Are the outdoor recreational facilities at the public school nearest to your home available to the public after school-hours and during the summer? (If available) Do you use these facilities? (If not available) If they were made available to the public would you use these facilities?"

In addition, a head of the household was asked a series of questions dealing with the types of improvements that would be desirable in recreational facilities. The following question was asked, "Recreation improvements can be in the form of improved physical facilities, expanded recreation programs, better equipment, increased supervision, and so on. Thinking now about the public schoolyard nearest to your home, what specific changes or improvements would you like to see to make the schoolyard more suitable for recreation?"

Availability of outdoor recreational facilities at nearest public school

Among all individuals, 61.7% report that the outdoor recreational facilities at the nearest public school are available to the public, 16.7% report that the facilities are not available, and 21.5% do not know whether or not the facilities are available. (4-025)

As might be expected, knowledge of the availability or unavailability of public school facilities is greatest among children and teenagers. 12.7% of individuals 5 to 9 years old do not know if the facilities are available, 9.0% of those 10 to 19 years old, 22.0% in the 20 to 29 year age group, 16.1% in the 30 to 44 year group, 28.2% in the 45 to 64 year group, and 44.5% in the 65 and over group. The relatively greater knowledge among individuals

30 to 44 years old probably reflects the fact that they have children or teenagers in their households. (4-025)

Although the fraction who do not know if the facilities are available increases with age, the fraction who said that the facilities are unavailable remains fairly constant at between 15% and 20%. As a result, the fraction who said that the facilities are available decreases with increasing age, but the decrease reflects primarily a decrease in knowledgeability rather than a real decrease in availability of facilities.

Knowledge of the availability of public school facilities is considerably greater among individuals from higher-income households. Among individuals from households with incomes under $4,000, 39.7% do not know if the nearest public school facilities are available, compared to only 14.3% for individuals from households in the $15,000 and over category. (4-025)

Moreover, the availability of public school facilities is greater in higher-income areas. Among individuals from households with incomes under $4,000, 73.0% report that the facilities at the nearest public school are available, compared to 82.9% for individuals from households in the $15,000 and over category, the percentages having been calculated on the basis of respondents other than those who do not know if the facilities are available. (4-025)

Calculating percents based on respondents other than those who do not know if the public school facilities are available, the availability of public school facilities is seen to be greater in medium population density places, 79.8%, and high density places, 79.5%, compared to low density places, 74.4%. Regions with the greatest availability of public school facilities are regions one, 84.2%; six, 85.7%; and eight, 80.3%. Regions with the lowest availability are regions four, 66.7%; and seven, 55.8%. (4-030)

Use of outdoor recreational facilities at nearest public school

In what follows, all percents are based on respondents other than those who do not know if the nearest public school facilities are available to the public.

As would be expected, the use of the outdoor recreational facilities at the public

school nearest the respondent varies dramatically according to the age of the individual. For all individuals, 31.5% report that they use the facilities. This percentage is exceeded in the 5 to 9 year group, 46.1%; in the 10 to 19 group, 52.6%; and in the 20 to 29 group, 41.3%. In the three higher age groupings the fraction falls off dramatically with increasing age of the individual: 30 - 44, 28.3%; 45 - 64, 9.7%; and 65 and over, 7.2%. Males are appreciably more inclined to use the facilities, 35.8%, than females, 27.3%. (4-025)

Use of the facilities increases dramatically with income, implying greater availability or attractiveness in the higher income neighborhoods. For individuals from households with incomes under $4,000, 21.1% report they use the facilities. The fraction rises to 21.2% in the $4,000 to $6,999 group, to 29.8% in the $7,000 - $9,999 group, to 33.0% in the $10,000 to $14,999 group, and to 37.6% in the $15,000 and over category. (4-025)

The use of public school recreation facilities has a strong direct relationship to the size of the household. Among individuals from households with 1 or 2 members, 15.3% use the facilities; with 3 or 4 members, 31.4% use the facilities; 5 or more, 39.5%. (4-026)

Use of public school facilities is only slightly greater among whites, 31.5%, than among nonwhites, 30.6%. An appreciably higher fraction of nonwhites, 27.6%, than whites, 21.1% report that the school facilities are not available to the public. Likewise, a higher fraction of nonwhites, 25.7%, than whites, 21.3% report that they do not know whether the facilities are available to the public, the percents being based on all individuals, in this instance. It would appear, therefore, that nonwhites have a somewhat reduced access to public school facilities compared to whites. (4-027)

The use of public school facilities is slightly greater in the medium population density places, 32.5% compared to the low density places, 28.9%, or the high density places, 31.6%. Knowledge as to whether or not the facilities are available to the public is relatively invariant with respect to population density. The regions with above-average use of school facilities are regions one, 35.4%; six, 33.4%; and eight, 50.2%. The three regions with the lowest fractions of individuals using school facilities are regions three, 25.1%; five, 21.5%; and seven, 20.8%. (4-030)

Overall, 12.0% of individuals report that they would use public school facilities

presently not available to the public if they were made available. In the low population density places the fraction is 14.3%; in the medium, 10.7%; and in the high, 12.5%. The highest percentage increments are for regions three, 15.4%; four, 18.2%; and seven, 16.0%. The lowest increments would be for regions six, 6.6% and eight, 3.8%. (4-030)

Improvements desired in school facilities

Heads of households were asked what specific changes or improvements they would like to see to make the nearest public schoolyard more suitable for recreation. The most frequently given responses were: don't know what is needed, don't have any ideas for improvements, 28.0%; the existing facility is satisfactory as it is, no changes are needed, 23.8%; not familiar with the facility, or none nearby, 12.2%.

There were nine specific suggestions made by at least 3% of households: more or better playground equipment, 10.5%; more or better tennis courts, 7.7%; more supervision, 7.3%; less crowded, larger, closer to home, 4.0%; more or better swimming facilities, or cleaner water, 3.8%; more games and programs for children, 3.6%; open after school and during summer, open longer, keep open, 3.2%; more or better basketball courts, 3.1%; and expanded recreation programs, more to do, 3.0%.

The fraction of households who cite more or better playground equipment is strongly inversely related to the age of the subject of the individual interview. Where the subject was 5 to 9 years of age, 24.8% cited this improvement; for the 10 to 19 year age group, 16.3%; 20 to 29, 15.5%; 30 to 44, 13.0%; 45 to 64, 5.5%; and 65 and over, 3.0%.

The desire for more or better tennis courts is related to the age and income of the subject, being strongest in the 10 to 44 year age group and in the upper income groups. For example, for families under $4,000, only 1.3% of households suggested more or better tennis courts as compared to 13.1% for households with incomes of $15,000 and over. (4-001)

The desire for more supervision is strongly related to the presence of young children. Among households where the subject of the interview was 5 to 9 years old, 16.8% desired more supervision; for the 10 to 19 year age group, 12.5%. The desire for more supervision is also directly related to total family income, rising to 10.0% for households with

incomes $15,000 and over. The desire of nonwhites for more supervision, 13.5%, is roughly twice as great as among whites, 7.0%. As would be expected, the desire for more programming for young children is strongly a function of the age of the subject of the interview. This is also true of the desire for more or better basketball courts. (4-001, 003)

There are appreciable regional differences in the recreation desires for the nearby public schoolyard. Regions which reflect greater-than-average satisfaction with the present situation are regions four, 25.0%; six, 30.6%; seven, 27.4%; eight, 26.2%; and nine, 25.0%. Satisfaction is inversely related to population density; for low population density places, 28.4%; for medium density places, 23.9%; and for high density places, 21.5%.

Regions with greater-than-average desire for more playground equipment are regions three, 11.7%; four, 11.5%; five, 14.9%; seven, 12.3%; nine, 13.5%; and ten, 11.7%. Households in the high population density places show a greater desire for more playground equipment, 12.4%, than those in the medium, 9.4%, or low density places, 9.6%.

Regions with the strongest desire for more and better tennis courts are region three, 8.9%; region four, 11.5%; six, 9.9%; seven, 8.2%; nine, 11.5%; and ten, 8.4%. The desire for more and better tennis courts is inversely related to population density: 8.8% in the low density places; 8.5% in the medium, and 6.1% in high density places.

The desire for more supervision varies strongly by region and is directly related to population density. Regions with greater-than-average desire for more supervision are regions one, 9.3%; two, 8.0%; nine, 8.3%; and ten, 7.8%. In the low density places, only 3.2% cited the need for more supervision, compared to 7.0% in the medium population density places and 9.5% in the high density places. (4-006)

Chapter 10.--IMPROVEMENTS DESIRED IN PARKS

Household heads were asked the following questions dealing with the improvements they would like to see in public recreation facilities:

> Recreation improvements can be in the form of improved physical facilities, expanded recreation programs, better equipment, increased supervision, and so on.
>
> (Thinking now about the public schoolyard nearest to your home, what specific changes or improvements would you like to see to make the schoolyard more suitable for recreation?)
>
> Now, for the nearest small neighborhood park that you know of, what specific changes or improvements would you like to see?
>
> What specific changes or improvements would you like to see in the nearest larger county or municipal park that you know of?
>
> What specific changes or improvements would you like to see in the nearest state park that you know of?

Neighborhood parks

Approximately three-tenths of household heads, 29.0%, feel that the nearest small neighborhood park is satisfactory as it is. The percentage does not vary strongly by age of subject, sex, total family income, region, or population density. It is somewhat lower for nonwhites, 24.3%; than for whites, 29.3%. There is appreciable variation according to the education of the head of the household. For those households where the head has had less than 9 years of schooling, 22.3% viewed the neighborhood park as satisfactory, compared to 24.6% for those with 9 to 11 years of schooling, 33.6% for those with 12 years, and 28.9% for those with at least some college.

The most frequently made suggestions for improvements are: more or better playground equipment or other equipment, 4.6%; clean up, fix up, remove broken glass, cut grass, paint, 4.6%; less crowded, larger, more of them, closer to home, 4.5%; more or

better swimming facilities, cleaner water, 4.4%; and more or better tennis courts, 4.2%. (4-007)

As would be expected, the desire for better playground or other equipment is a function of the age of the subject of the interview but not nearly so much as was the case for schoolyards. The desire for more or better tennis courts is highly concentrated in the upper income households. For example, only 1.0% of families with incomes under $4,000 desired more or better tennis courts compared to 7.0% for households with incomes $7,000 and over. Whites, 4.3% had a greater tendency to suggest more or better tennis courts than nonwhites, 2.7%. Nonwhites are much more concerned with policing and security, 5.4%, than whites, 2.0%. Neighborhood parks are viewed as being most satisfactory in region five, where 33.5% said that the park is satisfactory as it is. (4-007, 009, 011)

The need for more or better equipment, more supervision, better maintenance, and more security shows up most strongly for region one. These same needs peak in the high population density places. (4-011)

County or municipal parks

For improvements in the nearest larger county or municipal park, the most common suggestions are: more or better swimming facilities, cleaner water, 4.6%; less crowded, larger, closer to home, 4.2%; more or better tennis courts, 2.8%; clean up, fix up, remove broken glass, cut grass, paint, 2.5%; more or better playground or other equipment, 1.6%; better security, enforce regulations, 1.4%; and more supervision, 1.3%. In general, the desire for these improvements is far greater among upper income than lower income families. (4-013)

For most kinds of improvements, the response is greater among residents of high population density places (where municipal parks are presumably more common) than among those in medium or low density places. A notable exception is that the desire for additional county or municipal parks is greater among residents of low and medium density places. Region one has a greater-than-average expressed need for many kinds of improvements to county or municipal parks, including: more or better swimming facilities, more or better picnic facilities, more or better playground equipment, more supervision, better

maintenance, better security, and better landscaping. (4-018)

State parks

The responses for improvements desired in state parks indicate that a greater fraction of household heads are satisfied with state parks as they are, 35.2%, than are satisfied with public schoolyards, 23.8%, small neighborhood parks, 29.0%, or larger county or municipal parks, 33.2%.

The most frequently given specific suggestions for improvements to state parks are: more or better swimming facilities, cleaner water, 5.7%; less crowded, larger, more of them, closer to home, 3.8%; more or better camping facilities, cabins, areas for campers or trailers, 3.2%; more or better picnic facilities, 1.6%; and better maintenance, 1.5%. (4-019)

Regions one and two evidence the least familiarity with state parks. Statewide, 43.1% of household heads said that they do not know what improvements are needed or that they are not familiar with state parks. The corresponding percentages for regions one and two are 53.1% and 50.8%, respectively. Regions with the lowest percentages -- indicating the greatest familiarity with state parks -- are regions seven, 31.5%; eight, 32.1%; and nine, 33.3%. Familiarity with state parks appears to be inversely related to population density. Among households in low population density places, 38.2% indicated unfamiliarity with state parks, compared to 41.9% for medium density places and 46.7% for high density places. (4-024)

SURVEY OF DISABLED OR HANDICAPPED INDIVIDUALS
PRINCIPAL FINDINGS AND RECOMMENDATIONS

PENNSYLVANIA RECREATION SURVEY
OF DISABLED OR HANDICAPPED INDIVIDUALS
PRINCIPAL FINDINGS AND RECOMMENDATIONS

I. ABOUT THE SURVEY

The 1971 Pennsylvania statewide comprehensive outdoor recreation plan recognized that people who are partially or totally disabled or handicapped are denied outdoor recreational opportunities because of failure to meet their special requirements. These requirements have been interpreted as primarily physical, e.g., wider gates, ramps, paved walkways, handrails, specially placed and designed drinking fountains and toilet facilities, specially designed playground equipment, swimming pools with nonskid decks, ramps and fenced piers at fishing locations, braille interpretive markers on nature trails, etc. However, data on the recreation participation and preferences of the handicapped, as such, which can serve as a basis for evaluating project and program priorities have not been available. The present study is an initial effort to supply such data.

The following report is based on a scientifically designed telephone survey of approximately 600 disabled or handicapped Pennsylvanians 5 or more years of age, conducted in the months of June, July, and August, 1974, using WATS lines from a single location. Recreation participation was obtained for 19 outdoor-oriented activities and for 7 more sedentary or indoor-oriented activities. Respondents were asked for each activity whether they had participated in the activity during the past year, on how many different days during the year they had participated in the activity, and how much of their participation had been in Pennsylvania. For activities in which the respondent had not participated, he was asked whether he was at all interested in participating, and if so, what had prevented him from participating. For each activity in

which the respondent had participated, for the most recent participation in the activity it was determined who had accompanied the respondent and at what kind of place did the participation occur.

Respondents were also asked about the importance of 5 specified factors which tend to limit the recreation participation of individuals with disabilities or handicaps. The 5 limiting factors are: architectural or physical barriers, difficulties associated with transportation, lack of special programs for people with disabilities, fees and other costs associated with recreation activities, and attitudes and prejudices of non-disabled people towards people who have disabilities.

Respondents were asked whether they generally prefer to participate along with other people with similar conditions or with the general public. Finally, general socio-economic characteristics of the respondent were compiled, including age, sex, size of household, car ownership, education, employment status, family income, and race.

II. RECREATION PARTICIPATION BY DISABILITY

Approximately 1 in 8 in Pennsylvania households have 1 or more individuals with 1 or more of 8 specified disability conditions, namely: confined to a wheelchair; required to use braces, crutches, or a walker; blind or nearly blind; deaf or nearly deaf; coordination disability such as palsy; heart or lung disability which limits activity; emotionally disturbed; and mentally retarded. Among the disabled individuals, approximately one-half have heart or lung conditions and approximately one-eleventh are persons confined to a wheelchair.

The survey included 594 disabled or handicapped individuals 5 or more years of age. In some instances, the data are subject to high sampling error because the percent of disabled individuals who participated is very low for many of the listed activities, and the percent of handicapped individuals with a particular condition is low for some of the listed conditions. For example, only 3.7% of handicapped individuals surveyed were mentally retarded and of these, only 4.5% (one respondent) played tennis during the past year. For such activity/condition combinations, a difference

of 1 or 2 respondents more or less would make a very great difference in the percentages presented, so the percentages for such cases should be taken as being at best suggestive qualitative indicators rather than quantitative measures.

Table 1.--PRESENCE OF DISABLED OR HANDICAPPED PERSONS IN PENNSYLVANIA HOUSEHOLDS, 1974

Condition	Households	Disabled individuals	
		Percent	number in sample
Total	100.0%		
No disability present	87.9		
Disability present	12.1	100.0	594
Confined to a wheelchair	1.0	9.1	54
Required to use braces, crutches, or a walker	1.9	16.3	97
Blind or nearly blind	1.7	15.3	91
Deaf or nearly deaf	1.7	15.0	89
Coordination disability such as palsy	1.3	10.8	64
Heart or lung disability which limits activity	7.1	49.8	296
Emotionally disturbed	0.4	4.0	24
Mentally retarded	0.5	3.7	22

Participation in 26 activities

Among the 26 listed activities, there are four in which 20% or more of handicapped individuals participated during the past year. These activities are: sightseeing or driving for pleasure (41.6%), picnicking (38.0%), attending movies, plays, or concerts (28.8%), and swimming (20.5%). Another six activities were participated in by more than 10% of handicapped individuals: participating in groups for cards or other games (19.7%), visiting museums or zoos (15.7%), attending live sporting events (15.5%), participating in social or discussion groups (13.6%), hiking or nature walks (13.6%), and fishing (10.8%). As would be expected, the activities most participated in are the least athletic activities.

5 AND OVER, 65 AND OVER, AND
INDIVIDUALS WITH SELECTED DISABILITIES, PENNSYLVANIA, 1974
(Percent of persons)

Activity	Total population		Any listed disability	Wheel chair	Braces crutch walker	Blind or nearly blind	Deaf or nearly deaf	Coor-dination disab.	Heart lung disab.	Emo-tionally disturb.	Mentally re-tarded
	5 and over	65 and over									
Average	30.5	7.7	11.3	6.7	9.7	8.7	10.8	12.1	10.9	14.4	21.5
Bicycling	47.9	3.1	9.8	0.0	5.2	6.6	6.7	12.5	10.1	25.0	22.7
Swimming	66.7	11.7	20.5	7.4	16.5	14.3	21.3	26.6	17.6	29.2	63.6
Sightseeing or driving for pleasure	72.5	51.1	41.6	33.3	50.5	36.3	40.4	37.5	43.6	29.2	50.0
Basketball	22.2	0.0	4.2	3.7	1.0	4.4	4.5	6.2	2.0	4.2	18.2
Baseball or softball	32.4	1.1	5.1	1.9	2.1	4.4	2.2	7.8	3.7	8.3	27.3
Hiking or nature walks	40.9	11.6	13.6	1.9	8.2	12.1	14.6	6.2	14.2	25.0	27.3
Picnicking	70.6	35.3	38.0	31.5	36.1	27.5	39.3	35.9	35.5	37.5	77.3
Tennis	24.0	1.2	2.2	0.0	2.1	2.2	0.0	1.6	2.7	4.2	4.5
Fishing	31.9	8.4	10.8	3.7	4.1	9.9	11.2	12.5	11.8	12.5	27.3
Golf or miniature golf	29.0	5.1	6.2	3.7	3.1	4.4	4.5	9.4	6.1	4.2	9.1
Football	16.5	0.0	1.9	1.9	0.0	2.2	3.4	3.1	1.0	0.0	4.5
Off-road motorcycling or riding snowmobiles	12.0	0.3	2.7	0.0	2.1	1.1	4.5	4.7	2.4	4.2	0.0
Camping	26.3	3.8	8.1	0.0	6.2	5.5	10.1	9.4	6.8	16.7	22.7
Boating, canoeing or waterskiing	30.7	7.8	9.3	1.9	8.2	8.8	7.9	6.2	10.8	12.5	18.2
Hunting or sport shooting ...	14.0	5.1	4.7	0.0	2.1	3.3	6.7	4.7	5.7	0.0	4.5
Horseback riding	11.1	0.7	2.5	0.0	3.1	3.3	1.1	1.6	1.7	8.3	0.0
Ice skating	21.2	0.2	2.9	0.0	3.1	3.3	2.2	0.0	2.4	8.3	4.5
Street hockey	4.6	0.0	0.8	0.0	2.1	0.0	0.0	0.0	0.3	4.2	9.1
Snow skiing	4.9	0.0	0.5	0.0	1.0	2.2	0.0	0.0	0.0	0.0	0.0
Bowling	na	na	7.9	3.7	6.2	11.0	11.2	10.9	4.1	8.3	31.8
Visiting museums or zoos ...	na	na	15.7	14.8	13.4	11.0	10.1	15.6	16.9	25.0	22.7
Movies, plays, concerts ...	na	na	28.8	20.4	23.7	13.2	25.8	34.4	29.1	41.7	54.5
Attend live sporting events ..	na	na	15.5	11.1	12.4	18.7	15.7	15.6	15.2	8.3	18.2
Groups for cards, games	na	na	19.7	22.2	19.6	9.9	19.1	25.0	17.9	25.0	18.2
Groups for arts and crafts ..	na	na	6.4	3.7	9.3	2.2	2.2	7.8	5.7	20.8	18.2
Social or discussion groups .	na	na	13.6	7.4	10.3	9.9	15.7	10.9	15.5	12.5	4.5

na: Not asked in main survey

For the 19 outdoor-oriented activities, recreation participation rates for the general population 5 or more years of age were obtained in a related survey conducted simultaneously. For each of the 19 outdoor-oriented activities, participation by handicapped individuals is very much less than participation by the general population. For example, 66.7% of all individuals 5 years or over participated in swimming during the past year compared to only 20.5% of handicapped individuals 5 years or over. Naturally, the differences are even more dramatic for outdoor sports such as baseball or softball, golf or miniature golf, tennis, etc.

Mentally retarded

There is considerable variation in recreation participation depending on the respondent's disability condition. The variations correspond with what one might expect considering the nature of each disability and the physical requirements of each activity. Among individuals with at least one of the 8 listed disability conditions, the greatest amount of recreation participation occurs among those who are mentally retarded. Mentally retarded individuals have participation rates which are higher than the rates for all handicapped individuals in each of the 26 listed activities except off-road motorcycling or riding snowmobiles, hunting or sport shooting, horseback riding, snow skiing, participating in groups for cards or other games, and participating in social or discussion groups. Among the 19 outdoor-oriented activities for which participation rates were obtained for the general population 5 years and older, there are 6 activities for which the participation among mentally retarded individuals is comparable to the participation by the population in general: swimming, basketball, baseball or softball, picnicking, fishing, and camping.

Confined to a wheelchair

Individuals confined to a wheelchair have participation rates lower than the rates for all handicapped individuals in each of the 26 listed activities with the single exception of participating in groups for cards or other games. Among individuals confined to a wheelchair, the activities with the highest participation rates are: sightseeing or driving for pleasure (33.3%), picnicking (31.5%), participating in groups for cards or

other games (22.2%), attending movies, plays, or concerts (20.4%), and visiting museums or zoos (14.8%).

Braces, crutches, or a walker

Among individuals required to use braces, crutches, or a walker, the participation rates are lower than the rates for all handicapped individuals in each of the 26 activities except for sightseeing or driving for pleasure and participating in groups for arts and crafts. The rates were also higher for horseback riding, ice skating, and snow skiing, but the sample sizes involved are so small, on the order of 1 or 2 individuals, that the data connot be considered significant. Among individuals required to use braces, crutches, or a walker, the activities with the highest participation rates are sightseeing or driving for pleasure (50.5%), picnicking (36.1%), attending movies, plays, or concerts (23.7%), participating in groups for cards or other games (19.6%), and swimming (16.5%).

Blind or nearly blind

Among individuals who are blind or nearly blind, there are two activities for which the participation rates are significantly higher than the rates for all handicapped individuals: bowling and attending live sporting events. Among individuals who are blind or nearly blind, the activities with the highest participation rates are sightseeing or driving for pleasure (36.3%), picnicking (27.5%), attending live sporting events (18.7%), swimming (14.3%), attending movies, plays, or concerts (13.2%), and hiking or nature walks (12.1%).

Deaf or nearly deaf

Individuals who are deaf or nearly deaf have participation rates which are higher than the rates for all handicapped individuals in the following activities: swimming, basketball, hiking or nature walks, picnicking, fishing, football, off-road motorcycling or riding snowmobiles, camping, hunting or sport shooting, bowling, attending live sporting events, and participating in social or discussion groups. Among individuals

who are deaf or nearly deaf, the activities with the highest participation rates are: sightseeing or driving for pleasure (40.4%), picnicking (39.3%), attending movies, plays, or concerts (25.8%), swimming (21.3%), participating in groups for cards or other games (19.1%), attending live sporting events (15.7%), participating in social or discussion groups (15.7%), and hiking or nature walks (14.6%).

Coordination disability

Among individuals with a coordination disability such as palsy, activities for which the participation rates are higher than for all handicapped persons are: bicycling, swimming, basketball, baseball or softball, fishing, golf or miniature golf, football, off-road motorcycling or riding snowmobiles, camping, bowling, attending movies, plays, or concerts, attending live sporting events, participating in groups for cards or other games, and participating in groups for arts and crafts. The activities with the highest participation rates are: sightseeing or driving for pleasure (37.5%), picnicking (35.9%), attending movies, plays, or concerts (34.4%), swimming (26.6%), and participating in groups for cards or other games (25.0%).

Heart or lung disability

Among individuals with a heart or lung disability which limits their activity, activities for which participation rates are higher than for all handicapped individuals are: bicycling, sightseeing or driving for pleasure, hiking or nature walks, tennis, fishing, boating, canoeing or waterskiing, hunting or sport shooting, visiting museums or zoos, attending movies, plays, or concerts, and participating in social or discussion groups. The activities with the highest participation rates are: sightseeing or driving for pleasure (43.6%), picnicking (35.5%), attending movies, plays, or concerts (29.1%), participating in groups for cards or other games (17.9%), swimming (17.6%), and visiting museums or zoos (16.9%).

Emotionally disturbed

Individuals who are emotionally disturbed generally have participation rates

which are much higher than the rates for all handicapped individuals. The only activities for which the participation rates among individuals who are emotionally disturbed are significantly less than the rates for all disabled individuals are: sightseeing or driving for pleasure, hunting or sport shooting, and attending live sporting events. Among individuals who are emotionally disturbed, activities with the highest participation rates are: attending movies, plays, or concerts (41.7%), picnicking (37.5%), swimming (29.2%), sightseeing or driving for pleasure (29.2%), and bicycling, hiking or nature walks, visiting museums or zoos, and participating in groups for cards or other games (each 25.0%).

As has been seen, individuals who are mentally retarded or emotionally disturbed are considerably more active with respect to recreation participation than are individuals with other disability conditions. No doubt, the higher participation rates for the mentally retarded and the emotionally disturbed result in part from the absence of physical limitations among such individuals. However, it should be noted that the higher participation rates among the mentally retarded and the emotionally disturbed probably also reflect a greater concentration of younger people in these two categories. The other disability conditions are more closely related to aging and include a concentration of elderly persons. Among all handicapped or disabled individuals surveyed, fully 41.2% were at least 65 years of age and nearly two-thirds (63.3%) were at least 55 years of age. Hence, the reduced recreation participation among disabled persons compared to the general population is seen to result from the effects of aging as well as from the specific disabilities present. More will be said about age effects later.

Unsatisfied recreation interest

Recreation participation rates are lower for disabled individuals than they are for the general population in each of the 26 listed activities. The lower participation rates suggest that individuals who are disabled or handicapped are deprived of access to recreation. Of course, low participation rates are not of themselves evidence of deprivation. Deprivation is indicated, however, if individuals with low actual participation have expressed a high level of interest in participating. Thus, the extent to which

Table 3.--UNSATISFIED RECREATION INTEREST, POPULATION 5 AND OVER, 65 AND OVER, AND INDIVIDUALS WITH SELECTED DISABILITIES, PENNSYLVANIA, 1974

(Interested nonparticipants as a percent of current participants)

Activity	Total population 5 and over	Total population 65 and over	Any listed disability	Wheel chair	Braces crutch walker	Blind or nearly blind	Deaf or nearly deaf	Coor-dination disab.	Heart lung disab.	Emo-tionally disturb.	Mentally re-tarded
Average	24.2	15.3	15.7	24.5	11.9	16.9	20.0	15.3	17.7	17.8	8.1
Bicycling	13.7	64.3	12.1	0.0	40.0	0.0	16.7	0.0	16.7	16.7	0.0
Swimming	4.6	21.7	16.4	25.0	12.5	46.2	26.3	5.9	19.2	14.3	14.3
Sightseeing or driving for pleasure	3.5	5.2	3.6	0.0	2.0	6.1	2.8	12.5	3.9	14.3	0.0
Basketball	19.5	0.0	16.0	0.0	100.0	0.0	25.0	25.0	16.7	100.0	25.0
Baseball or softball	11.8	10.0	20.0	0.0	50.0	25.0	50.0	20.0	18.2	50.0	0.0
Hiking or nature walks	17.7	17.1	8.6	0.0	0.0	0.0	7.7	25.0	11.9	0.0	0.0
Picnicking	4.5	5.0	4.9	5.9	2.9	12.0	5.7	8.7	6.7	0.0	0.0
Tennis	47.8	27.3	92.3	---	0.0	0.0	---	100.0	87.5	200.0	100.0
Fishing	28.6	30.3	31.3	150.0	75.0	11.1	30.0	37.5	22.9	66.7	16.7
Golf or miniature golf	25.9	23.9	32.4	100.0	66.7	25.0	50.0	16.7	38.9	100.0	0.0
Football	19.4	0.0	36.4	0.0	0.0	50.0	0.0	0.0	33.3	0.0	100.0
Off-road motorcycling or riding snowmobiles	76.8	133.3	56.3	0.0	100.0	100.0	0.0	33.3	71.4	0.0	0.0
Camping	53.3	47.1	12.5	0.0	16.7	0.0	0.0	16.7	20.0	0.0	0.0
Boating, canoeing or waterskiing	43.9	41.4	21.8	100.0	25.0	12.5	28.6	50.0	9.4	33.3	0.0
Hunting or sport shooting	39.6	23.9	35.7	---	100.0	33.3	16.7	0.0	29.4	---	0.0
Horseback riding	145.1	100.0	86.7	0.0	33.3	66.7	300.0	100.0	140.0	50.0	0.0
Ice skating	40.9	0.0	23.5	0.0	33.3	33.3	0.0	0.0	28.6	0.0	0.0
Street hockey	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Snow skiing	194.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bowling	na	na	36.2	0.0	0.0	20.0	40.0	28.6	75.0	50.0	28.6
Visiting museums or zoos ...	na	na	20.4	12.5	15.4	20.0	55.6	20.0	24.0	0.0	0.0
Movies, plays, concerts ...	na	na	9.9	18.2	4.3	33.3	17.4	13.6	10.5	0.0	0.0
Attend live sporting events ..	na	na	20.7	50.0	16.7	17.6	28.6	30.0	22.2	0.0	0.0
Groups for cards, games ...	na	na	8.5	0.0	0.0	11.1	5.9	12.5	17.0	0.0	0.0
Groups for arts and crafts ..	na	na	39.5	200.0	11.1	50.0	100.0	40.0	47.1	0.0	0.0
Social or discussion groups .	na	na	8.6	25.0	0.0	11.1	21.4	0.0	8.7	0.0	0.0

na: Not asked in main survey

recreation interests are unsatisfied may be measured by the number of interested nonparticipants as a percent of the number of current participants.

Among the 19 outdoor-oriented activities for which participation rates were obtained for the general population, there are 6 activities for which the level of unsatisfied recreation interest (interested nonparticipants as a percent of current participants) is higher for handicapped individuals than for the general population: swimming, baseball or softball, tennis, fishing, golf or miniature golf, and football. It seems likely that the 6 activities named above are not the only ones for which there is a relatively high level of unsatisfied recreation interest among handicapped individuals, but that such individuals tend to consider certain activities as completely unavailable to them and they have, therefore, accommodated their interests to what they perceive as the reality of their situation. As noted previously, the disabled population includes a concentration of elderly persons; 41.2% are at least 65 years of age. It makes sense, therefore, to compare the levels of unsatisfied recreation interest among handicapped individuals to the levels among individuals in the general population aged 65 and over. Such comparison shows that disabled or handicapped individuals have relatively high levels of unsatisfied recreation interest in 3 activities in addition to the 6 activities named above. The 3 additional activities are: basketball, hunting or sport shooting, and ice skating.

The levels of unsatisfied recreation interest (interested nonparticipants as a percent of current participants) indicate which activities have the potential for the greatest percentage increase in participation. However, for many of the listed activities the participation by disabled or handicapped individuals is so small that a high percentage increase in participation would represent only a small numerical increase. It is worthwhile, therefore, to examine the actual numbers of handicapped individuals who are interested nonparticipants in each activity. For each activity, the number of interested nonparticipants is rather small. The activities with the highest numbers of interested nonparticipants are: swimming (3.4% of handicapped persons are interested nonparticipants), fishing (3.4%), visiting museums or zoos (3.2%), attending live sporting events (3.2%), bowling (2.9%), and participating in groups for arts and crafts (2.5%).

These are the activities which might be expected to have the greatest potential for increased participation by disabled or handicapped individuals in absolute terms rather than relative to the present population of participants.

III. FAMILIES, FRIENDS, AND GROUPS AS FACILITATORS OF RECREATION

For each activity in which the respondent participated in the past year, it was determined who the respondent went with on the occasion of the most recent participation in the activity. Disabled or handicapped individuals 5 or more years of age go with family or friends more often than with an organized group or by themselves in each of the 26 listed activities except for participating in a social or discussion group or in a group for arts and crafts, which activities are by definition group activities. Disabled or handicapped individuals very seldom go alone to participate in recreation activities. Among the 26 listed activities, there are only 5 activities in which more than 10% of disabled or handicapped participants went alone to participate on the most recent occasion. The 5 activities are: bicycling (36.2% went alone), horseback riding (20.0%), off-road motorcycling or snowmobiling (18.8%), hiking or nature walks (17.5%), and hunting or sport shooting (11.1%). It should be pointed out that the sample sizes for horseback riding and off-road motorcycling or snowmobiling are only 15 and 16 individuals, respectively.

The role of organized groups, clubs, and teams in facilitating recreation for the disabled or handicapped is relatively small compared to the role of families and friends. Among the 26 listed activities, there are only 5 activities in which more than 20% of disabled or handicapped participants went with an organized group, club, or team to participate on the most recent occasion. The 5 activities are: participating in a social or discussion group (62.5% went with an organized group), participating in a group for arts and crafts (50.0%), participating in a group for cards or other games (34.5%), basketball (28.0%), and bowling (27.7%).

It is clear that disabled or handicapped individuals are unwilling or unable to participate in recreation activities by themselves, and that for the most part the only alternative open to disabled individuals is participation with family or friends. The role of

Table 4.--WHO ACCOMPANIED HANDICAPPED PERSON, MOST RECENT RECREATION PARTICIPATION, PENNSYLVANIA, 1974

	All participants		Went alone	Went with:		
	Sample count	Percent		Family, friends	Nurse, compan.	Organ., group
Sightseeing or driving for pleasure	247	100.0	3.3	93.5	0.8	2.4
Picnicking	226	100.0	0.0	95.1	0.9	4.0
Movie, play, or concert	171	100.0	4.1	93.0	0.0	2.9
Swimming	122	100.0	4.9	89.4	0.0	5.7
Group for cards or other games	117	100.0	2.6	62.9	0.0	34.5
Museum or zoo	93	100.0	1.1	87.1	0.0	11.8
Live sporting event	92	100.0	4.4	89.0	0.0	6.6
Social or discussion group	81	100.0	2.5	35.0	0.0	62.5
Hiking or nature walks	81	100.0	17.5	75.0	0.0	7.5
Fishing	64	100.0	9.5	88.9	0.0	1.6
Bicycling	58	100.0	36.2	63.8	0.0	0.0
Boating, canoeing or waterskiing	55	100.0	1.8	96.4	0.0	1.8
Camping	48	100.0	0.0	91.7	0.0	8.3
Bowling	47	100.0	2.1	70.2	0.0	27.7
Group for arts and crafts	38	100.0	5.3	44.7	0.0	50.0
Golf or miniature golf	37	100.0	2.7	89.2	0.0	8.1
Baseball or softball	30	100.0	3.3	83.4	0.0	13.3
Hunting or sport shooting	28	100.0	11.1	88.9	0.0	0.0
Basketball	25	100.0	0.0	72.0	0.0	28.0
Ice skating	17	100.0	0.0	100.0	0.0	0.0
Off-road motorcycling or snowmobiling	16	100.0	18.8	81.2	0.0	0.0
Horseback riding	15	100.0	20.0	80.0	0.0	0.0
Tennis	13	100.0	0.0	84.6	0.0	15.4
Football	11	100.0	0.0	90.9	0.0	9.1
Street hockey	5	100.0	0.0	80.0	0.0	20.0
Snow skiing	3	100.0	0.0	100.0	0.0	0.0

organized groups, clubs, and teams is relatively small. Disabled or handicapped individuals, especially elderly individuals, who do not have family or friends with whom they can participate are denied access to recreation. It seems clear, therefore, that an expansion in the role of organized groups in facilitating recreation would result in substantial expansion in recreation participation among disabled or handicapped individuals. Moreover, it is only through organized groups that such expansion can occur.

IV. SOCIO-ECONOMIC EFFECTS

Car ownership effects

Car ownership is a major determinant of recreation participation among disabled or handicapped individuals. In each of the 26 listed activities without exception the percentage of disabled or handicapped individuals who participated is greater among those in a household with a car than among those without a car. Across all 26 activities the average number of activities participated in by handicapped individuals in car-owning households was 3.3 compared to 1.2 for noncar-owning households. For example, among disabled or handicapped individuals in a household with a car 42.3% participated in picnicking in the past year compared to only 19.8% for those without a car.

In 12 of the listed activities there were no participants in households without a car, despite the fact that fully 19.5% of the sample (116 respondents) were individuals in households without a car.

Activities for which there is the least amount of difference between the participation rates of individuals in households with a car compared to those without a car are group-oriented activities, namely: participating in social or discussion groups, participating in groups for arts and crafts, participating in groups for cards and other games, and attending movies, plays, or concerts. It is clear that organized groups can serve to compensate for the reduced access to recreation on the part of individuals in households without a car. Organized groups could, through programs to provide transportation for disabled or handicapped individuals without a car, produce significant increases in recreation participation among such individuals who currently are denied access to recreation.

Table 5.--AVERAGE NUMBER OF SELECTED ACTIVITIES PARTICIPATED IN AT LEAST ONCE A YEAR BY HANDICAPPED PERSONS AND POPULATION 5 AND OVER, PENNSYLVANIA, 1974

	19 activities		26 activities
	Handicapped	Population 5 and over	Handicapped
Total	1.9	5.8	2.9
Car-owning household	2.2	6.0	3.3
Noncar-owning household	0.6	2.1	1.2
Household size:			
1 - 2 persons	1.2	3.4	2.0
3 or more persons	2.5	6.6	4.1
Family income:			
Under $4,000	0.6	2.7	1.0
$4,000 - $6,999	1.5	3.3	2.3
$7,000 - $9,999	2.2	5.7	3.4
$10,000 - $14,999	2.8	6.6	4.5
$15,000 and over	3.7	7.3	6.0
Age:			
5 - 29	4.9	8.2	7.3
30 - 64	1.9	4.5	3.1
65 and over	0.8	1.5	1.3
Sex:			
Male	2.1	6.6	3.1
Female	1.6	5.1	2.7
Disability:			
Confined to a wheelchair	0.9	- -	1.7
Required to use braces, crutches, or a walker	1.6	- -	2.5
Blind or nearly blind	1.5	- -	2.3
Deaf or nearly deaf	1.8	- -	2.8
Coordination disability such as palsy	1.9	- -	3.1
Heart or lung disability which limits activity	1.8	- -	2.8
Emotionally disturbed	2.3	- -	3.8
Mentally retarded	3.9	- -	5.6

Table 6.--RECREATION PARTICIPATION OF HANDICAPPED PERSONS IN CAR-OWNING AND NONCAR-OWNING HOUSEHOLDS, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

	All handicapped persons	Car ownership	
		Car-owning household	No car
Average, 26 activities	11.3	12.8	4.6
Sightseeing or driving for pleasure	41.6	46.1	22.4
Picnicking	38.0	42.3	19.8
Movie, play or concert	28.8	30.6	20.7
Swimming	20.5	24.5	3.4
Group for cards or other games	19.7	20.8	14.7
Museum or zoo	15.7	18.0	5.2
Live sporting event	15.5	18.0	5.2
Social or discussion group	13.6	13.6	12.9
Hiking or nature walks	13.6	15.5	5.2
Fishing	10.8	13.2	0.9
Bicycling	9.8	11.9	0.9
Boating, canoeing or waterskiing	9.3	11.5	0.0
Camping	8.1	9.9	0.0
Bowling	7.9	9.9	0.0
Group for arts and crafts	6.4	6.5	6.0
Golf or miniature golf	6.2	7.3	1.7
Baseball or softball	5.1	6.3	0.0
Hunting or sport shooting	4.7	5.9	0.0
Basketball	4.2	5.2	0.0
Ice skating	2.9	3.6	0.0
Off-road motorcycling, snowmobiling	2.7	3.4	0.0
Horseback riding	2.5	3.1	0.0
Tennis	2.2	2.5	0.9
Football	1.9	2.3	0.0
Street hockey	0.8	1.0	0.0
Snow skiing	0.5	0.6	0.0

RECREATION PARTICIPATION OF HANDICAPPED PERSONS IN CAR-OWNING AND NONCAR-OWNING HOUSEHOLDS, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

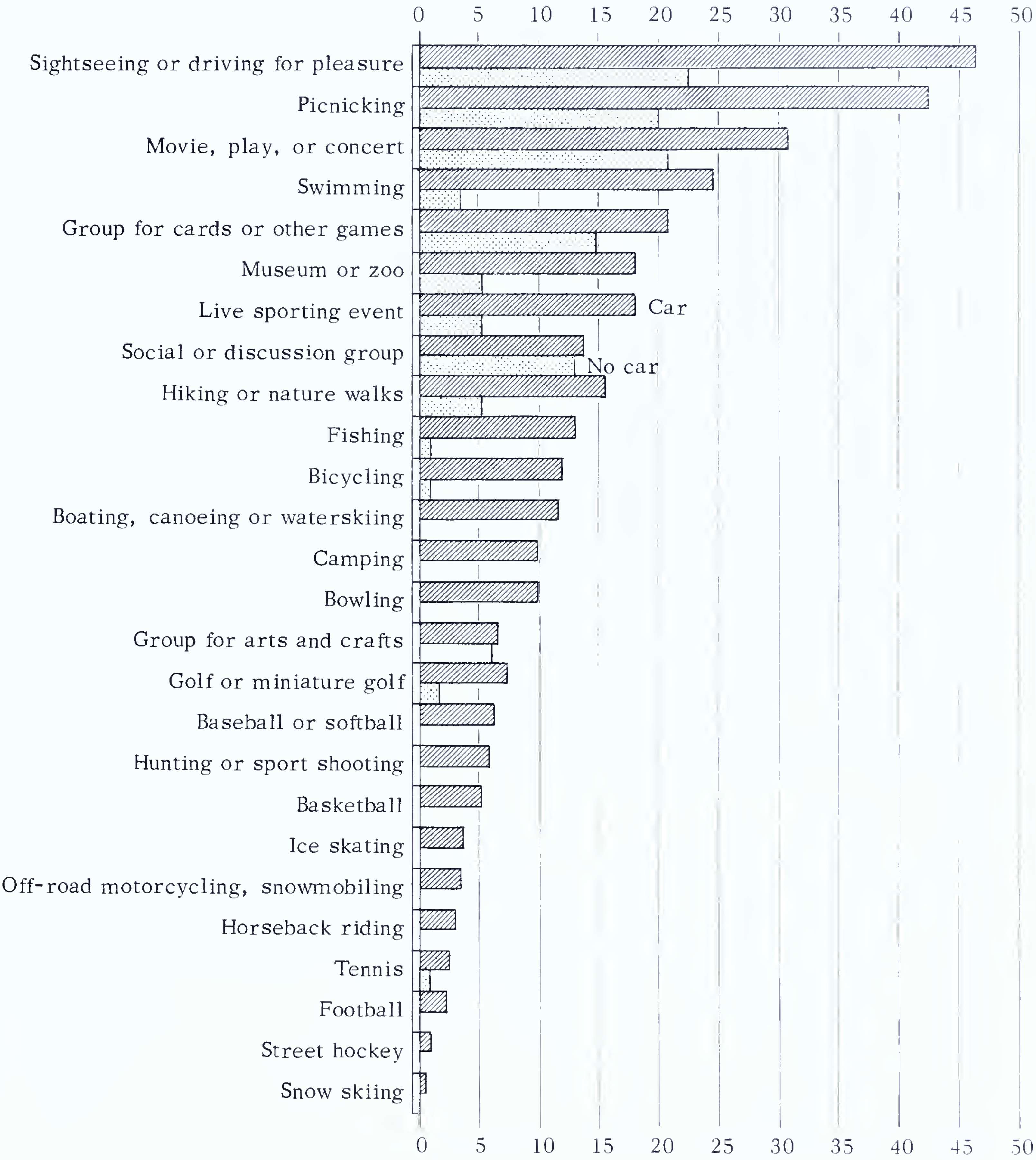


Chart 1

Household size effects

Recreation participation is greater among disabled or handicapped individuals in larger households than among those in smaller households. For each of the 26 listed activities with the single exception of participating in a social or discussion group the percentage of disabled or handicapped individuals who participated is greater among those in households with 3 or more members than it is among those in households with only 1 or 2 members. For example, among handicapped individuals in households with 3 or more members 51.5% participated in picnicking in the past year compared to only 26.7% for those in households with 1 or 2 members. Similarly, among disabled individuals in households with 3 or more members 33.0% participated in swimming in the past year compared to only 9.8% for those in households with 1 or 2 members.

The higher participation rates among handicapped individuals in the larger households are accounted for partly by the fact that such individuals are more likely to have young children or to be children or young people themselves. Moreover, as has already been noted, handicapped participants go with family or friends to participate in recreation activities on the great majority of occasions. Recreation participation by handicapped individuals in larger households is facilitated by the presence of family members with whom they can go to participate. Recreation participation among handicapped individuals in households with only 1 or 2 members could be facilitated by expansion of the role of organized groups who could take the place of family members for such individuals.

Income effects

Family income is also a major determinant of recreation participation among disabled or handicapped individuals. In each of the 26 listed activities without exception the percentage of handicapped individuals who participated in the past year is greater among those with family incomes of $7,000 or more than it is among those with family incomes less than $7,000. For example, among handicapped individuals with family incomes of $7,000 or more 43.9% attended a movie, play, or concert in the past year compared to only 16.2% for those with family incomes under $7,000. Similarly, among handicapped individuals with family incomes of $7,000 or more 33.5% participated in swimming in the

Table 7.--RECREATION PARTICIPATION OF HANDICAPPED PERSONS BY HOUSEHOLD SIZE, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

	All handicapped persons	Persons in household	
		1 or 2	3 +
Average, 26 activities	11.3	7.6	15.7
Sightseeing or driving for pleasure	41.6	36.2	48.5
Picnicking	38.0	26.7	51.5
Movie, play, or concert	28.8	20.6	39.0
Swimming	20.5	9.8	33.0
Group for cards or other games	19.7	16.9	23.1
Museum or zoo	15.7	10.4	21.2
Live sporting event	15.5	10.4	22.0
Social or discussion group	13.6	14.4	12.5
Hiking or nature walks	13.6	9.2	18.6
Fishing	10.8	6.7	15.5
Bicycling	9.8	3.7	17.4
Boating, canoeing or waterskiing	9.3	5.8	13.3
Camping	8.1	4.3	12.5
Bowling	7.9	4.0	12.9
Group for arts and crafts	6.4	4.3	9.1
Golf or miniature golf	6.2	3.7	9.5
Baseball or softball	5.1	1.5	9.5
Hunting or sport shooting	4.7	3.4	6.4
Basketball	4.2	0.9	8.3
Ice skating	2.9	0.6	5.7
Off-road motorcycling, snowmobiling	2.7	1.2	4.5
Horseback riding	2.5	0.9	4.5
Tennis	2.2	0.9	3.8
Football	1.9	0.3	3.8
Street hockey	0.8	0.0	1.9
Snow skiing	0.5	0.3	0.8

RECREATION PARTICIPATION OF HANDICAPPED PERSONS BY HOUSEHOLD SIZE, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

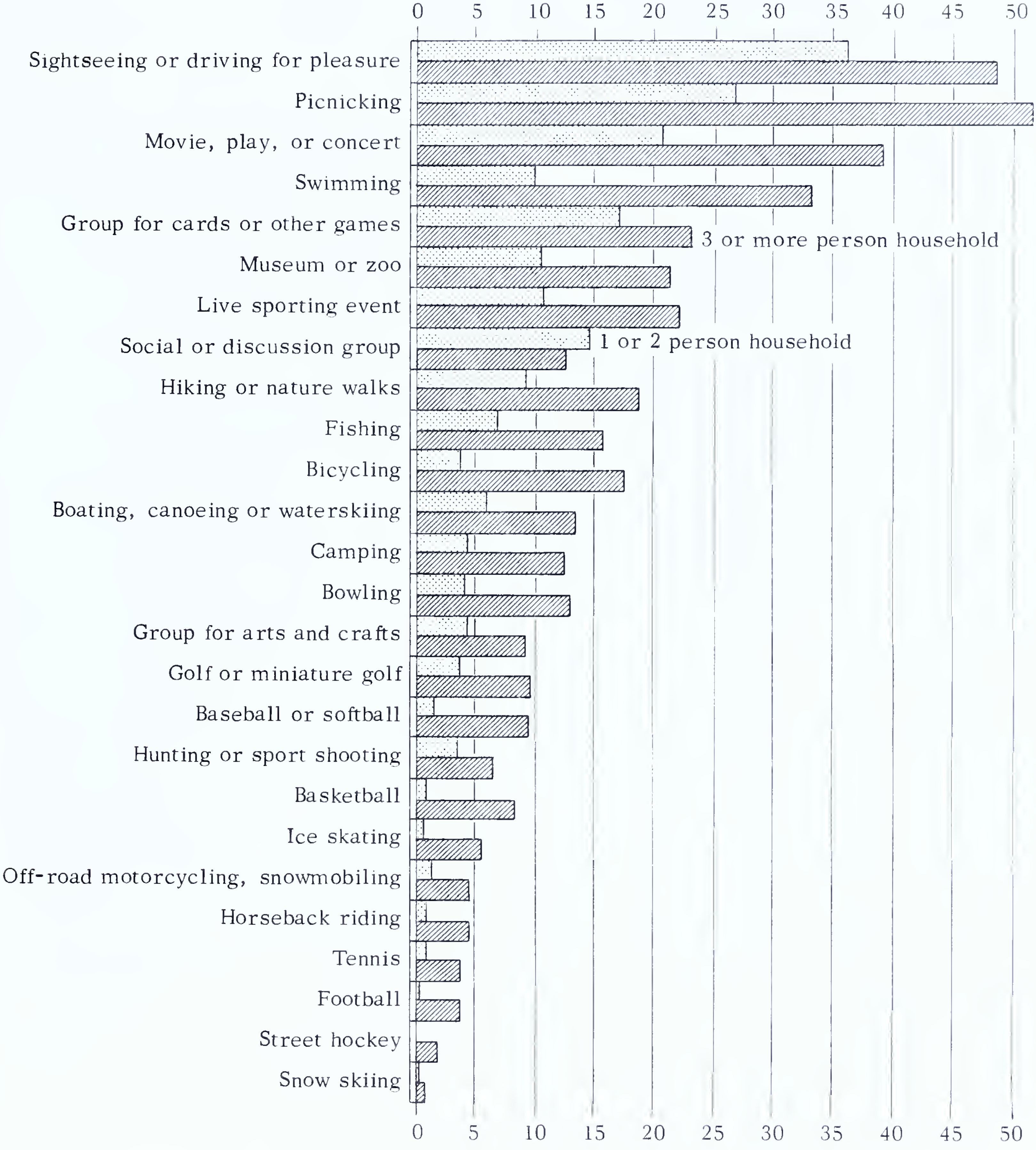


Chart 2

Table 8.--RECREATION PARTICIPATION OF HANDICAPPED PERSONS BY FAMILY INCOME, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

	All handicapped persons	Total family income				
		Under $4,000	$4,000 $6,999	$7,000 $9,999	$10,000 $14,999	$15,000 plus
Average, 26 activities ..	11.3	3.8	9.0	13.0	17.1	23.1
Sightseeing or driving for pleasure	41.6	23.2	40.5	47.3	54.7	64.8
Picnicking	38.0	17.0	35.9	46.5	52.3	50.0
Movie, play, or concert	28.8	8.0	22.2	29.5	46.5	74.1
Swimming	20.5	2.7	10.5	23.3	37.2	51.9
Group for cards or other games	19.7	9.8	14.4	24.8	30.2	33.3
Museum or zoo	15.7	2.7	11.8	20.9	25.6	37.0
Live sporting event	15.5	0.0	14.4	18.6	23.3	37.0
Social or discussion group	13.6	13.4	13.1	10.9	14.0	22.2
Hiking or nature walks	13.6	3.6	11.1	17.1	24.4	24.1
Fishing	10.8	5.4	9.2	14.7	12.8	20.4
Bicycling	9.8	1.8	3.3	10.9	19.8	31.5
Boating, canoeing or waterskiing	9.3	1.8	7.8	12.4	15.1	16.7
Camping	8.1	0.9	5.9	13.2	12.8	14.8
Bowling	7.9	0.9	5.9	6.2	17.4	16.7
Group for arts and crafts	6.4	4.5	5.9	8.5	5.8	11.1
Golf or miniature golf	6.2	0.0	3.9	7.0	14.0	13.0
Baseball or softball	5.1	0.9	2.6	4.7	7.0	20.4
Hunting or sport shooting	4.7	1.8	5.9	7.0	3.5	5.6
Basketball	4.2	0.0	3.3	3.9	5.8	11.1
Ice skating	2.9	0.0	1.3	1.6	7.0	13.0
Off-road motorcycling, snowmobiling	2.7	0.0	1.3	3.1	7.0	5.6
Horseback riding	2.5	0.9	1.3	2.3	5.8	5.6
Tennis	2.2	0.0	2.0	1.6	3.5	7.4
Football	1.9	0.0	0.7	1.6	3.5	7.4
Street hockey	0.8	0.0	0.0	0.0	1.2	5.6
Snow skiing	0.5	0.0	0.0	1.6	1.2	0.0

RECREATION PARTICIPATION OF HANDICAPPED PERSONS IN HOUSEHOLDS WITH INCOMES UNDER AND OVER $7,000, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

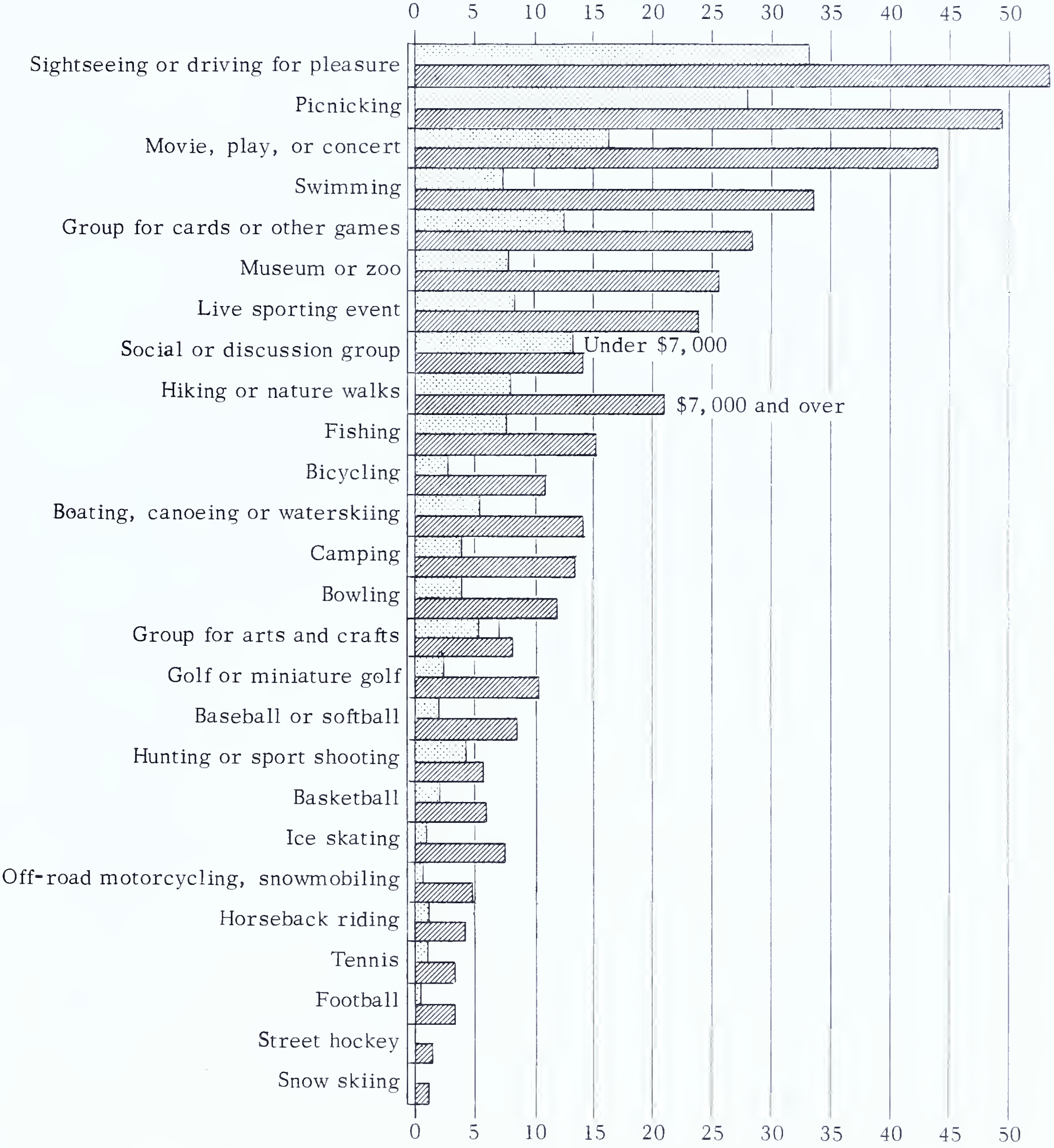


Chart 3

past year compared to only 7.2% for those with family incomes under $7,000. Organized groups which could offer recreation opportunities at reduced cost could be expected to produce substantial increases in recreation participation among disabled or handicapped individuals with low incomes.

Age effects

Age is a very strong determinant of recreation participation among disabled or handicapped individuals. In nearly all of the 26 listed activities participation drops off sharply with increasing age and virtually disappears by age 65. Exceptions are sightseeing or driving for pleasure, participating in groups for cards or other games, and participating in social or discussion groups. Thus, for example, among handicapped individuals 5 to 29 years of age 67.9% participated in swimming in the past year compared to 31.6% for those 30 to 54 years old, 12.2% for those 55 to 64 years old, 4.5% for those 65 to 74 years old, and 0.9% for those 75 years or older. Among handicapped individuals 5 to 29 years of age 54.3% participated in sightseeing or driving for pleasure in the past year compared to 50.7% for those 30 to 54 years old, 40.5% for those 55 to 64 years old, 32.1% for those 65 to 74 years old, and 33.6% for those 75 years or older.

In each of the 26 listed activities without exception the participation rate among handicapped individuals 5 to 29 years of age is greater than for all handicapped individuals. The participation rate among handicapped individuals 30 to 54 years of age is greater than the rate for all handicapped individuals for each of the 26 listed activities except baseball or softball and tennis. In contrast, the participation rate among handicapped individuals 55 to 64 years of age is lower than the rate for all handicapped individuals for each of the 26 listed activities except for participating in a social or discussion group and hunting or sport shooting. Among handicapped individuals 65 to 74 years of age the participation rate is lower than the rate for all handicapped individuals for each of the 26 listed activities with the single exception of participating in a social or discussion group. Among handicapped individuals 75 years or older the participation rate is lower than the rate for all handicapped individuals for each of the 26 listed activities without exception.

Table 9.--RECREATION PARTICIPATION OF HANDICAPPED PERSONS BY AGE, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

	All handicapped persons	5-29 years	30-54 years	55-64 years	65-74 years	75 + years
Average, 26 activities	11.3	28.0	15.8	8.2	5.9	3.6
Sightseeing or driving for pleasure	41.6	54.3	50.7	40.5	32.1	33.6
Picnicking	38.0	71.6	55.9	25.2	26.1	20.9
Movie, play, or concert	28.8	61.7	44.1	22.1	17.2	7.3
Swimming	20.5	67.9	31.6	12.2	4.5	0.9
Group for cards or other games	19.7	29.6	27.9	14.5	15.7	13.6
Museum or zoo	15.7	42.0	21.3	13.7	7.5	1.8
Live sporting event	15.5	37.0	22.8	15.3	6.7	0.9
Social or discussion group	13.6	14.8	16.9	14.5	14.2	7.3
Hiking or nature walks	13.6	33.3	19.9	9.9	8.2	2.7
Fishing	10.8	25.9	14.7	9.2	6.7	1.8
Bicycling	9.8	39.5	14.0	4.6	0.7	0.0
Boating, canoeing, or waterskiing	9.3	21.0	16.2	7.6	3.0	0.9
Camping	8.1	25.9	15.4	2.3	2.2	0.0
Bowling	7.9	32.1	12.5	1.5	1.5	0.0
Group for arts and crafts	6.4	22.2	6.6	3.1	3.7	1.8
Golf or miniature golf	6.2	22.2	9.6	3.8	0.7	0.0
Baseball or softball	5.1	27.2	4.4	1.5	0.0	0.0
Hunting or sport shooting	4.7	8.6	8.1	6.1	1.5	0.0
Basketball	4.2	21.0	5.1	0.8	0.0	0.0
Ice skating	2.9	13.6	4.4	0.0	0.0	0.0
Off-road motorcycling, snowmobiling	2.7	12.3	2.9	1.5	0.0	0.0
Horseback riding	2.5	11.1	2.9	1.5	0.0	0.0
Tennis	2.2	2.3	0.7	0.8	0.7	0.0
Football	1.9	9.9	2.2	0.0	0.0	0.0
Street hockey	0.8	6.2	0.0	0.0	0.0	0.0
Snow skiing	0.5	3.7	0.0	0.0	0.0	0.0

RECREATION PARTICIPATION OF HANDICAPPED PERSONS 55 - 64 AND 65 AND OVER, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

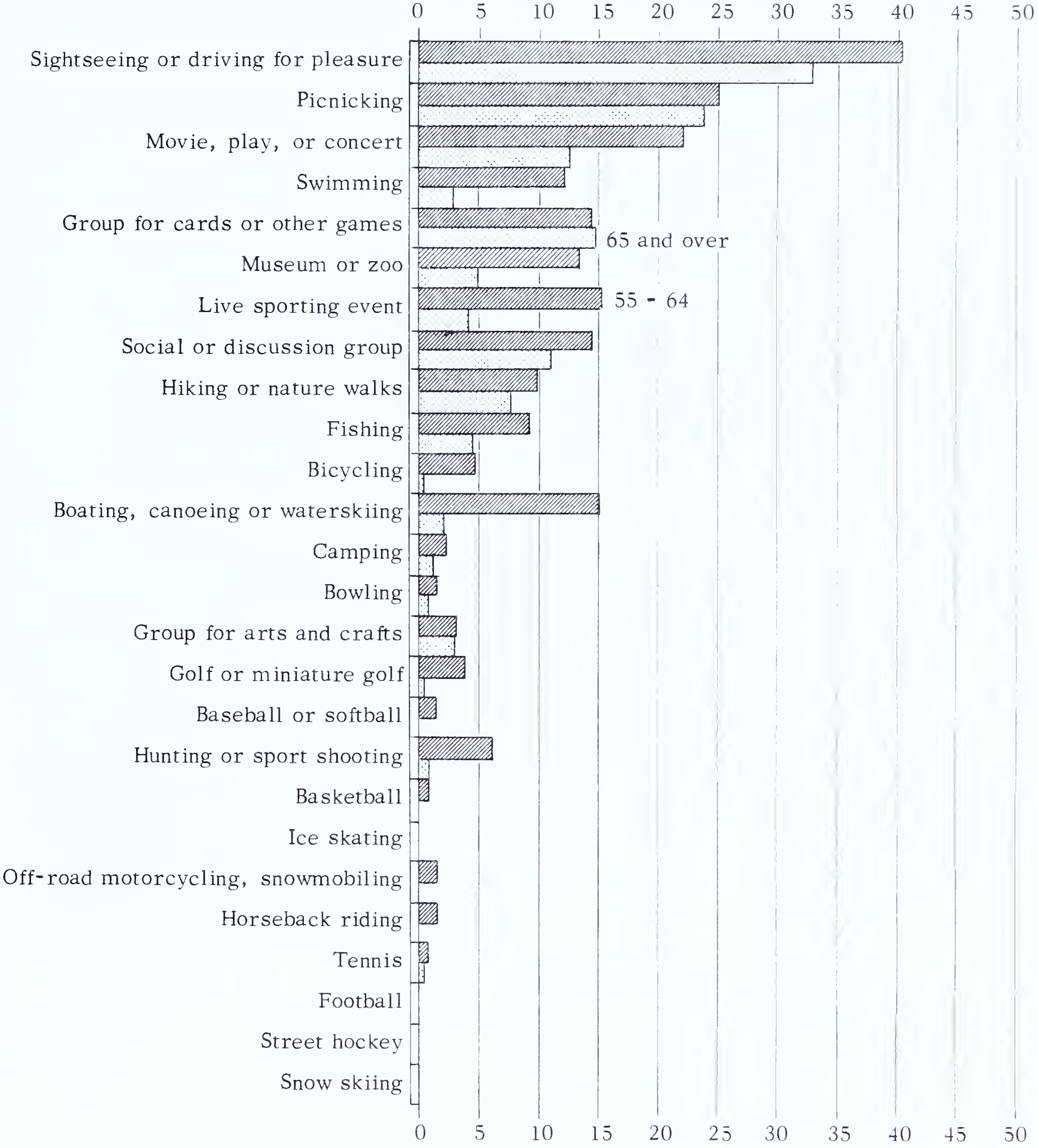


Chart 4

Sex effects

There is some variation in recreation participation by disabled or handicapped individuals depending on their sex. Participation in the outdoor-oriented activities tends to be higher among males, while participation in the more sedentary or indoor-oriented activities tends to be higher among females. Activities for which participation among disabled or handicapped individuals is higher for males than for females are: swimming, attending live sporting events, hiking or nature walks, fishing, bicycling, boating, canoeing or waterskiing, camping, bowling, golf or miniature golf, baseball or softball, hunting or sport shooting, basketball, off-road motorcycling or snowmobiling, horseback riding, football, street hockey, and snow skiing. Activities for which participation is higher for females than for males are: sightseeing or driving for pleasure, picnicking, attending movies, plays, or concerts, participating in groups for cards or other games, visiting museums or zoos, participating in social or discussion groups, participating in groups for arts and crafts, and tennis.

V. FACTORS LIMITING PARTICIPATION BY THE HANDICAPPED

Respondents were asked to rate each of 5 specified factors as very important, important, or not very important in preventing them from participating in recreation activities. The 5 limiting factors are: architectural or physical barriers, diffculties associated with transportation, lack of special programs for people with disabilities, fees and other costs associated with recreation activities, and attitudes and prejudices of nondisabled people towards people who do have disabilities. Respondents were also asked whether they generally prefer to participate along with other people with similar conditions or with the general public.

For each of the 5 factors limiting recreation participation, roughly one-half of all disabled or handicapped individuals rate the factor as either very important or important in preventing them from participating in recreation activities. Only 6.3% of handicapped individuals said they prefer to participate along with other people with similar conditions.

Table 10.--RECREATION PARTICIPATION OF MALE AND FEMALE HANDICAPPED PERSONS, PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

	All handicapped persons	Sex of subject	
		Male	Female
Average, 26 activities	11.3	12.1	10.3
Sightseeing or driving for pleasure	41.6	40.0	42.7
Picnicking	38.0	36.6	39.7
Movie, play, or concert	28.8	26.2	30.8
Swimming	20.5	22.8	18.0
Group for cards, or other games	19.7	16.9	21.7
Museum or zoo	15.7	15.2	16.6
Live sporting event	15.5	20.7	9.8
Social or discussion group	13.6	12.8	14.9
Hiking or nature walks	13.6	15.2	11.9
Fishing	10.8	16.9	5.1
Bicycling	9.8	11.4	8.1
Boating, canoeing or waterskiing	9.3	11.7	6.8
Camping	8.1	11.0	5.4
Bowling	7.9	9.3	5.8
Group for arts and crafts	6.4	3.8	8.8
Golf or miniature golf	6.2	7.2	5.1
Baseball or softball	5.1	6.6	3.7
Hunting or sport shooting	4.7	9.0	0.7
Basketball	4.2	6.2	2.0
Ice skating	2.9	2.4	3.1
Off-road motorcycling, snowmobiling	2.7	4.1	1.4
Horseback riding	2.5	2.8	2.4
Tennis	2.2	1.0	3.1
Football	1.9	3.4	0.3
Street hockey	0.8	1.0	0.7
Snow skiing	0.5	0.7	0.3

RECREATION PARTICIPATION OF MALE AND FEMALE HANDICAPPED PERSONS

PENNSYLVANIA, 1974

(Percent of persons participating at least once a year)

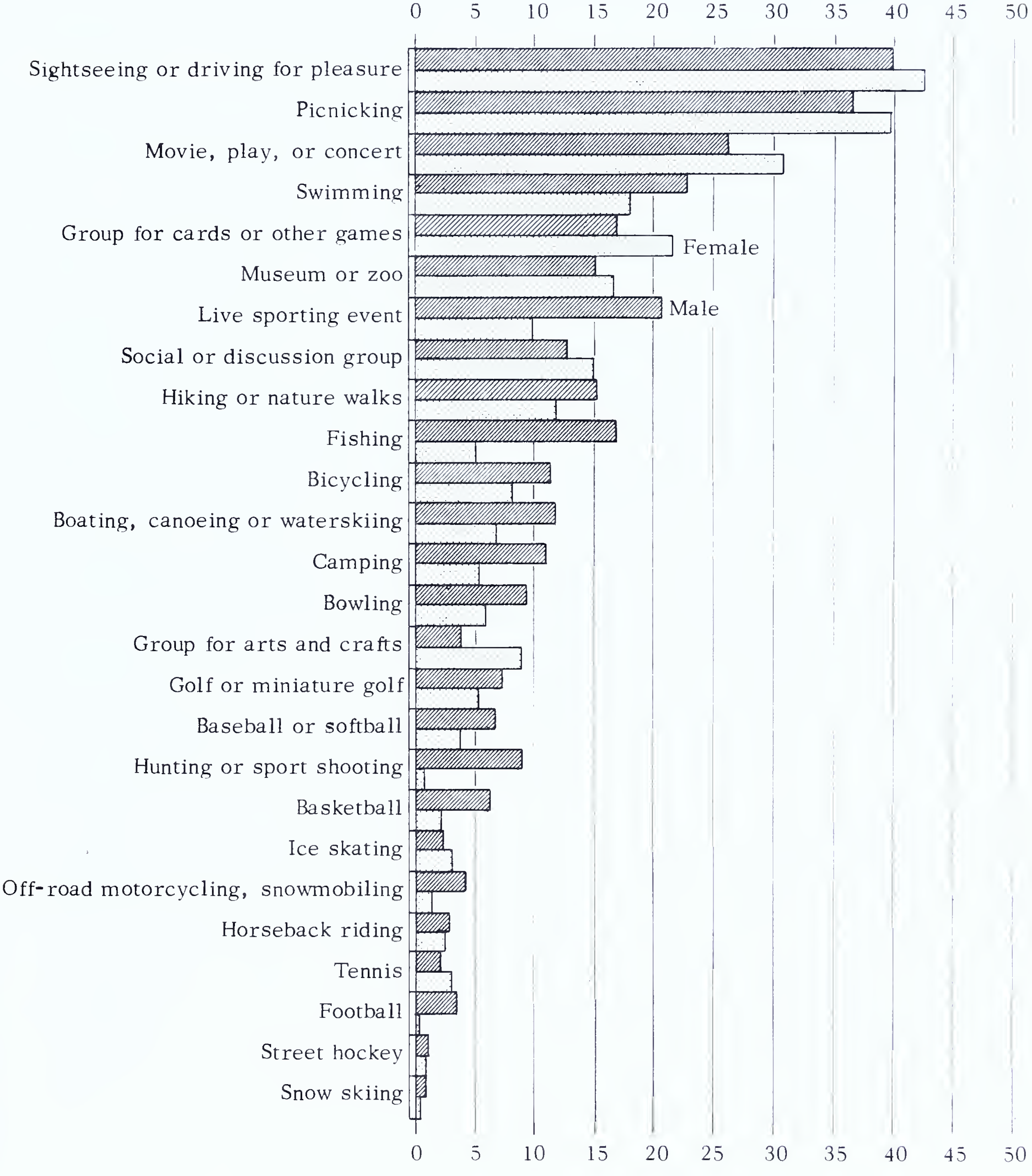


Chart 5

Architectural or physical barriers

Among all handicapped or disabled individuals, 39.4% said that architectural or physical barriers are very important, 11.3% said they are important, and 49.3% said they are not very important in preventing them from participating in recreation activities. Thus, about 50.7% of handicapped individuals said that architectural or physical barriers are either very important or important.

Naturally, there is considerable variation by disability condition in the importance attached to architectural barriers. The greatest percentage of individuals rating architectural barriers as very important occurs among individuals confined to a wheelchair (63.0%), individuals required to use braces, crutches, or a walker (52.6%), and individuals with a coordination disability such as palsy (46.9%). Handicapped individuals to whom architectural barriers are relatively not very important are the emotionally disturbed (70.8% said that architectural barriers are not very important), the mentally retarded (63.6%), and the deaf or nearly deaf (60.7%).

Difficulties associated with transportation

Among all disabled or handicapped individuals, 37.0% said that difficulties associated with transportation are very important, 9.9% said they are important, and 53.1% said they are not very important in preventing them from participating in recreation activities. Thus, 46.9% of handicapped individuals said that difficulties associated with transportation are either very important or important.

The percentages of individuals who said that difficulties associated with transportation are very important are greatest among individuals who are blind or nearly blind (53.8%), individuals confined to a wheelchair (53.7%), individuals required to use braces, crutches, or a walker (45.4%), and individuals with a coordination disability such as palsy (43.8%). Handicapped individuals to whom difficulties associated with transportation are relatively not very important are individuals with a heart or lung disability which limits their activity (58.4% said difficulties associated with transportation are not very important), individuals who are mentally retarded (54.5%), individuals who are deaf or nearly deaf (53.9%), and individuals who are emotionally disturbed (50.0%).

Lack of special programs for people with disabilities

Among all disabled or handicapped individuals, 36.5% said that the lack of special programs for people with disabilities is very important, 18.6% said it is important, and 44.9% said it is not very important in preventing them from participating in recreation activities. Thus, 55.1% of handicapped individuals said that the lack of special programs is either very important or important.

The greatest percentages of handicapped individuals who said that the lack of special programs is very important occurs among individuals who are mentally retarded (57.1%), individuals with a coordination disability such as palsy (48.4%), and individuals confined to a wheelchair (46.3%). Handicapped individuals to whom the lack of special programs is relatively not very important are the emotionally disturbed (54.2% said that the lack of special programs is not very important), individuals with a heart or lung disability (48.3%), and individuals who are deaf or nearly deaf (48.3%).

Fees and other costs associated with recreation activities

Of all handicapped individuals, 37.2% said that fees and other costs associated with recreation activities are very important, 19.3% said they are important, and 43.6% said they are not very important in preventing them from participating in recreation activities. Thus, 56.5% of handicapped individuals said that fees or other costs are either very important or important.

The greatest percentages of handicapped individuals who said that fees and other costs are very important in preventing them from participating in recreation activities occur among individuals with a coordination disability such as palsy (47.6%), individuals required to use braces, crutches, or a walker (42.6%), and individuals who are mentally retarded (40.9%). Handicapped individuals to whom fees and other costs are relatively not very important are individuals who are emotionally disturbed (54.2% said that fees and other costs are not very important) and individuals confined to a wheelchair (50.0%).

Attitudes and prejudices of nondisabled people

Among all disabled or handicapped individuals, 30.5% said that attitudes and prejudices of nondisabled people are very important, 16.4% said they are important, and 53.1% said they are not very important in preventing them from participating in recreation activities. Thus, 46.9% of handicapped individuals said that attitudes and prejudices of nondisabled people are either very important or important.

By far the greatest percentages of handicapped individuals who said that attitudes and prejudices of nondisabled people are very important in preventing them from participating in recreation activities occur among the mentally retarded (63.6%) and individuals with a coordination disability such as palsy (44.4%).

Participating with the public

Among all disabled or handicapped individuals, only 6.3% said that they generally prefer to participate along with other people with conditions similar to their own rather than with the general public. The greatest percentages of handicapped individuals who said they generally prefer to participate with other people with similar conditions rather than with the general public occur among individuals who are mentally retarded (36.4%), individuals who are emotionally disturbed (12.5%), and individuals with a coordination disability such as palsy (11.1%). However, it is clear that the great majority of handicapped individuals prefer not to have separate recreation facilities and programs.

It should be pointed out that the responses for an emotionally disturbed or mentally retarded individual were given not by the individual himself but by another member of his household, usually one of the household heads. Mentally retarded individuals show the highest percentages who said that the lack of special programs is very important, that attitudes and prejudices of nondisabled people are very important, and that they generally prefer to participate with other people with the same condition. These facts may be taken as indicating the feelings of the families of the mentally retarded rather than of the mentally retarded themselves.

VI. ACTION RECOMMENDATIONS

The current recreation survey of disabled and handicapped individuals was not designed to evaluate or compare the effectiveness of specific action alternatives in recreation planning. However, certain patterns of deprivation and resource underutilization are evident in the survey data, and it is clear that action proposals which are to be considered must satisfy the minimum requirement of being consistent with the patterns observed. Evaluation of specific action proposals would be dependent upon further research of a substantially different design.

In what follows, several action proposals will be recommended. The proposals should not be viewed as necessary consequences of the data but as plausible working hypotheses which are entirely consistent with the data. Certain of the recommendations result more from an intuitive understanding of the recreation situation of handicapped individuals than from the hard data itself. However, it is felt that the recommendations arise from an intuition which is extremely well informed as a result of sifting, studying, and analyzing the massive amounts of data collected both in the survey of handicapped individuals and in the main recreation survey. In a sense, the recommendations suggested themselves. They are not ideas which are being imposed on the data, they grew out of the data.

The purpose here is not to outline a detailed recreation program or recreation plan but rather to introduce some concepts which could lead to more effective recreation planning and specific types of actions which are consistent with the concepts introduced. The reader is also referred to the report Pennsylvania Recreation Survey: Principal Findings And Recommendations for further discussion of recommendations for more effective recreation planning.

Problems and needs of the disabled and handicapped

In many respects the problems and needs of disabled and handicapped individuals with respect to recreation are the same as those of individuals in the population at large.

Just as for the general population, there is evidence for the handicapped population that certain subgroups are deprived of access to recreation. Particularly disadvantaged subgroups include: individuals in noncar-owning households, individuals in low income households, the elderly, and individuals with physical handicaps which limit their mobility.

The deprivation experienced by handicapped individuals in the disadvantaged subgroups is more severe, however, than it is for members of the general population. For example, individuals with severe physical handicaps are affected much more seriously than are others by the lack of access to a car, because public transportation is unsuitable for them. Similarly, low income is more of a liability for a severely handicapped individual whose recreation options are already so limited.

Of course, there are also basic differences between the problems and needs of handicapped individuals with respect to recreation and those of the population at large. The most obvious difference is that handicapped individuals are prevented from participating in certain activities because of the nature of their handicaps themselves. Moreover, handicapped individuals tend to be limited in the amount of income available to them, in their ability to travel, etc. Of particular importance is the fact that handicapped individuals find it less possible or at least less desirable to participate in recreation activities alone. They are more dependent on the presence of family and friends with whom they can participate. Handicapped individuals who live alone and have less in the way of family and friends available to them are therefore denied equal access to recreation. Finally, it appears that the recreation interests and appetites of handicapped individuals have been curtailed by accommodation to what they perceive as the reality of their situation. It would seem that efforts to increase the recreation opportunities of handicapped individuals might very well renew interests which are currently dormant.

Just as the sources of recreation deprivation among handicapped individuals are in many respects the same as the sources for the general population, the types of action which would serve to increase participation by the general population would also increase participation by the handicapped. Indeed, the three premises of more effective recreation planning presented in the Pennsylvania Recreation Survey report apply even more strongly

to the handicapped population than to the general population.

Groups as facilitators and organizers of recreation

The key to overcoming recreation deprivation among disabled and handicapped individuals lies in stimulating and supporting expansion of the role of groups as facilitators and organizers of recreation. As has been seen, the recreation participation of handicapped individuals is very strongly dependent on the presence of a car in the household and on the presence of other individuals, either family or friends, with whom the handicapped person can go to participate. Organized groups, therefore, could fill basic needs of disabled and handicapped individuals by providing transportation and by bringing together persons who do not have family and friends with whom they can participate. Moreover, the limited incomes available to handicapped individuals are an important factor in depriving them of access to recreation. Organized groups enable recreation outings at reduced cost.

Handicapped individuals have accommodated their recreation interests to the "reality" of their situation, so it is important that groups not only change that reality by producing new recreation opportunities for handicapped individuals, but also they must provide the publicity and information needed to make handicapped individuals realize that their recreation situation is in fact changing.

Organized groups make it possible for seriously disabled individuals to participate. Persons who are confined to wheelchairs can be helped on and off buses, and so on. It is not necessary that organized outings be arranged solely for the handicapped, only that the handicapped be encouraged to participate. As has been seen, the majority of disabled and handicapped individuals actually prefer to participate with the general public rather than just with individuals who have similar conditions.

It may be noted that the mentally retarded participate more fully in recreation than any other handicapped group, and that group participation is far more important for them than the handicapped population generally. While the greater group participation is not the primary reason for their greater participation, it does make a significant contribution.

It is particularly important to emphasize that programs designed to overcome recreational deprivation on the part of disadvantaged segments of the population at large would automatically benefit the handicapped population. In particular, a program of recreation stamps for the elderly (see the Pennsylvania Recreation Survey Report) would necessarily stimulate participation in recreation by the handicapped. Since more than 40% of disabled and handicapped individuals surveyed were at least 65 years of age, a program directed at the elderly would include many handicapped individuals directly. Indirectly, such a program would stimulate and support the role of groups as facilitators and organizers of recreation in general. Such groups, once organized, would naturally seek to expand their coverage beyond the elderly, and since organized groups could so readily meet the needs of the handicapped it seems inevitable that handicapped individuals would be included. Of course, the inclusion of handicapped individuals could be stimulated directly through some form of subsidy.

Latent and actual recreation supply

Increased awareness of the role of groups and public information in facilitating recreation participation lies at the heart of changes which are needed in what might be called the philosophy of current recreation planning. Traditional recreation planning has concerned itself primarily with physical facilities and resources which are measured in terms of numbers of swimming pools, linear feet of beach, acres of game land, etc. The emphasis has been on static elements. However, there are intangible dynamic elements which have major impact on recreation participation. The dynamic elements must be included in recreation planning.

Physical facilities should be thought of as representing only latent supply rather than supply itself. This latent supply becomes active, as it were, only through its usage. Thus, organized events or outings increase directly the supply of recreation resources. Thinking of recreation supply in this dynamic way, one sees immediately the importance of stimulating the role of organized groups as facilitators of recreation. Such groups represent a relatively rapid, inexpensive, and manageable method of increasing recreation supply associated with any given set of physical facilities.

Organized groups and public information are more than just an added dimension of physical recreation supply. Groups and information are themselves a major recreation resource. Recreation planning should recognize groups and information as being a major recreation resource which must be cultivated and developed as consciously and deliberately as are physical facilities and resources in current planning thinking. As with any physical recreation resource, means should be developed to measure the groups and information resource and to monitor its growth.

Underutilized mass transit

Groups and information are not the only recreation resource which is currently being neglected. Underutilized mass transit facilities also represent a latent recreation resource which could be of major importance in stimulating recreation participation by disabled and handicapped individuals. As a recreation resource, mass transit facilities would be needed primarily at the very times when they are currently standing idle--on weekends and in the evening. Indeed, use of mass transit facilities for recreation outings when they would otherwise be standing idle would benefit the mass transit systems themselves.

Handicapped individuals in noncar-owning households are severely deprived of access to recreation. Recall that in 12 of the 26 listed activities there were no participants among handicapped individuals in households without a car, despite the fact that fully 19.5% of the sample were individuals in households without a car. Since the deprivation is so severe among handicapped individuals in households without a car, it may be expected that making mass transit available to them for recreation outings would have a substantial impact on the overall level of recreation participation by disabled and handicapped individuals.

An effective program of mass transit for recreation would necessarily go hand-in-hand with programs to stimulate the role of organized groups as facilitators of recreation. Groups would provide the organizational and financial capability needed for economical, efficient use of vehicles and they would provide supervision and control of individuals in transit and at recreation sites. By the same token, programs to increase the

role of organized groups in recreation would increase the demand for mass transit facilities for recreation outings.

Similarly, an effective program of mass transit for recreation would depend heavily on effective dissemination of information concerning available facilities, available means of access to facilities and new types of recreation opportunities. Advertising and the dissemination of information would be required to produce the level of demand needed to support a program of mass transit for recreation.

State recreation data base

If the State is to plan effectively for increased recreation participation by disabled and handicapped individuals, substantial expansion of the data base is required. The present data base is simply inadequate to enable meaningful analysis of the recreation problems and needs of the various handicapped groups separately. The sample sizes are just too small. As a result, specific action recommendations for segments of the population with specific handicap conditions considered separately are not possible at the present time.

Taken as a whole, the disabled and handicapped represent a recreationally disadvantaged segment of the population much like individuals in noncar-owning households, individuals in low-income households, and the elderly. Therefore, the recommendations for actions to benefit recreationally disadvantaged subgroups in general which appear in the State Recreation Survey report apply to the disabled and handicapped, and the reader is referred to that report for details. It is to be emphasized, however, that substantial expansion of the current data base relating to recreation by the disabled and handicapped is a prerequisite to effective planning in this area.

Much enlarged sample sizes are required. Costs may be controlled by employing survey designs which give greater coverage to less frequently occurring disability conditions. Only a fraction of respondents encountered who have more common conditions, such as heart or lung conditions, would have to be interviewed to provide adequate sample sizes for these conditions. Respondents with less common conditions would be interviewed

in a proportionately greater fraction of cases. A composite picture for the whole handicapped population could then be assembled by computer. Adequate samples for each disability condition separately would thus be obtained at reduced cost.

Expansion of the scope and detail of the activity list used is also required. A list of recreation activities implies a preconceived set of recreation priorities. Activities which are excluded from the list tend to be excluded from planning consideration. More sedentary and indoor-oriented activities need to be included. Activity lists and detail questions should be tailored to specific disability conditions. Activities such as park-sitting and walking for pleasure, which are participated in locally and are not dependent on access to an automobile, deserve greater representation.

Expansion of the activity list and of the detail obtained for each activity need not entail proportionately longer, more costly interviews. One could rotate among sets of activities or sample randomly among individual activities so that each respondent would be questioned only on a subset of the activity list. Moreover, activity lists and questions which pertain to specific disability conditions could be inserted. Activities which are participated in less frequently could be given greater coverage. A composite picture for each disability condition, for each activity, and for the whole handicapped population could then be assembled by computer.

As has been seen, the recreation participation of handicapped individuals is greatly dependent on the presence of family and friends with whom they can participate. What might be called "social connectedness" is seen to be a major determinant of recreation participation by disabled or handicapped individuals and is therefore a proper subject for further investigation.

Finally, the role of groups in organizing and facilitating recreation participation among the handicapped needs to be measured and detailed. The current extent and effectiveness of organized group activity in recreation needs to be determined, and future progress and growth in the role of groups needs to be monitored. Data on the role of groups should be obtained both by questioning participants on the types of groups they participate with and on the types of groups available to them and also by surveying various kinds of organized groups directly.

APPENDIX: SAMPLE DESIGN

The survey of disabled and handicapped individuals represented one phase of the Pennsylvania Recreation Survey. When households were contacted for the recreation survey, it was determined whether any household members had one of the 8 specified disability conditions. If so, the disability questionnaire was administered for each disabled household member. The main recreation survey questionnaire was administered to a selected household member in any case. During the main recreation survey phase, some 400 interviews with disabled or handicapped individuals were obtained. A decision was made that a total of 600 such interviews would be required, and as a result a supplementary survey was conducted in which only disabled and handicapped individuals were interviewed.

The survey was a telephone survey, and the sample was drawn from residential listings in telephone directories. As a result, only households with telephones and with listed telephone numbers were included in the sample, so that there is a bias against very low and very high income households and women living alone in metropolitan areas.

The drawing of the sample began with the assembling of telephone directories for the entire state of Pennsylvania, more than 160 directories in all. In many cases telephone directories were duplicated under different covers with different yellow pages. Directories were examined initially to detect such duplications and eliminate duplicates where possible. After duplicates were weeded out, some 93 directories remained.

Estimates of the total number of listings were required for each directory. The estimates were obtained by systematically sampling columns of listings from each directory, counting the number of listings in each sampled column, and multiplying by the number of columns per page and the number of whole pages to obtain the estimated number of listings per directory.

A uniform sampling fraction of .0093758 was applied to each directory to obtain the number of listings to be selected from the directory.

Listings were selected in clusters. The size of cluster selected depended on the way in which the directory was organized. Some directories were organized alphabetically by the name of the telephone subscriber. In such directories, the listings were thoroughly mixed with respect to telephone exchange and geographical location, so that large clusters containing 50 listings each could be selected without distorting the geographical representation. Other directories, however, were organized by locality or telephone exchange. For such directories it was necessary to restrict cluster length to only 8 listings in order to insure better geographical representation. Still other directories, which were organized by groups of localities and had, therefore, some geographical stratification but not as much as exchange-organized directories, were allowed to have a compromise cluster length of 25 listings.

A total of 2,181 clusters were selected which represents an average cluster size of approximately 1.4 households per cluster for the main survey and .28 respondents per cluster for the handicapped survey.

The number of listings to be selected from a directory was divided by the chosen cluster length for the directory to determine the number of clusters to be selected. A sampling interval within the directory was then determined, and clusters were selected systematically. Clusters were examined to detect obviously nonresidential listings, which were eliminated.

The remaining residential listings were then keypunched onto punch cards along with their area code and directory number. In many cases, telephone exchanges appeared in more than one directory, even after duplicate directories had been eliminated. To prevent such exchanges from being overrepresented because they appeared in more than one directory, the punch card file was examined by computer. For each telephone exchange, the number of directories in which the exchange appeared was determined. If an exchange appeared in three directories, for example, then only every third listing in that exchange was taken. At the same time that exchanges were checked for duplication, listings themselves were checked for duplication and duplicates were eliminated.

38,336 telephone listings were input to this process. Of these, 264 listings were found to be duplicates and were eliminated. After selection of listings to compensate for duplicate exchanges, 29,468 sample listings remained. The total number of telephone exchanges appearing in the main survey sample is 912.

The 29,468 sample listings were arranged in subsamples of 100 listings each in such a way that each subsample was representative of the state as a whole. It was not known at the outset what fraction of the 29,468 listings would be required to obtain the number of interviews needed. Through the device of dividing the sample into representative subsamples, however, it was possible to proceed through the subsamples and simply stop when the desired number of interviews had been obtained and still have a representative sample at any stopping point.

Since the sample was stratified by area code and exchange, the reduction in sampling error associated with the fine geographical stratification greatly outweighs the increase in sampling error attributable to clustering. Therefore, estimates of sampling error based on simple random sampling tend to overstate the sampling error.

The following formula therefore presents high side estimates of the sampling error of survey percentages:

$$\sigma_{p'} = \sqrt{\frac{p\,(1-p)}{n-1}} \qquad \text{where}$$

$\sigma_{p'}$ = sampling error of a survey proportion

p = the survey proportion

n = the sample count on which the survey proportion is based.

Table 11.--SAMPLING ERRORS (ONE SIGMA) IN PERCENTAGE POINTS

	Survey percentage					
Base of percentage	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
20	5.0	6.9	9.2	10.5	11.2	11.5
50	3.1	4.3	5.7	6.5	7.0	7.1
100	2.2	3.1	4.0	4.6	4.9	5.0
200	1.5	2.1	2.8	3.2	3.5	3.5
400	1.1	1.5	2.0	2.3	2.5	2.5
594	0.9	1.2	1.6	1.9	2.0	2.1

The above table is used as follows: enter the row with the respondent count approximately equal to the base of a percentage; pick a column corresponding to the survey percentage. The figure in the cell corresponds to the one sigma error range above or below the percentage in the column head. The chances are approximately 68 in 100 that the true percentage will fall within plus or minus one sigma of the survey percentage, and 95 in 100, within two sigma. Thus, for example, a survey proportion of 40% based on a sample of 100 respondents may be expected to represent a true figure between 35.1% and 44.9% in 68 cases out of 100.

A minimum of 4 calls were made to each telephone number used before dropping it because of inability to make contact. In the process of counting the 4 calls, busy signals represented 1/3 of a call. In this way, a bias toward respondents who were at home more and used their phones less was reduced. Having contacted a household, at least 3 additional calls were made, if necessary, to reach the specific individual designated for interview. Times and days of calls were noted so that interviewers could choose times for callbacks when they were most likely to be successful.

The household interview consisted of two parts, a recreation participation part and a household characteristics part. All individuals in the household with one of the designated disabilities were interviewed with respect to recreation participation. If

the designated individual was incapable of being interviewed by virtue of deafness or some other condition, an adult member of the household who was knowledgeable about the subject's recreation participation was allowed to speak for the subject.

A head of household was the eligible respondent for the household characteristics part of the household interview. Frequently, obtaining this information required that the household be contacted again to reach a head of household.

METHODOLOGICAL APPENDIX

APPENDIX: SAMPLE DESIGN

The Pennsylvania Recreation Survey was administered by telephone, and the sample was drawn from residential listings in telephone directories. As a result, only households with telephones and with listed telephone numbers were included in the sample, so that there is a bias against low and very high income households and against women living alone in metropolitan areas. The composition of the sample with respect to sex and age is reasonably close to the 1970 census distributions, as is shown in Table 21. The sample is also biased toward white and better-educated individuals and toward car-owning households.

The drawing of the sample began with the assembling of telephone directories for the entire State of Pennsylvania, more than 160 directories in all. In many cases telephone directories were duplicated under different covers with different yellow pages. Directories were examined initially to detect such duplications and eliminate duplicates where possible. After duplicates were weeded out, some 93 directories remained.

Estimates of the total number of listings were required for each directory. The estimates were obtained by systematically sampling columns of listings in each directory, counting the number of listings in each sample column, and multiplying by the number of columns per page and the number of whole pages to obtain the estimated number of listings per directory. A uniform sampling fraction of .0093758 was applied to each directory to obtain the number of listings to be selected initially from the directory.

Listings were selected in clusters. The size of cluster selected depended on the way in which the directory was organized. Some directories were organized alphabetically by the name of the telephone subscriber. In such directories, the listings were thoroughly mixed with respect to telephone exchange and geographical location, so that large clusters containing 50 listings each could be selected without distorting the geographical representation. Other directories, however, were organized by locality or telephone exchange. For such directories it was necessary to restrict cluster lengths to only 8 listings in order to insure better geographical representation. Still other

Table A1

POPULATION AND HOUSEHOLD CHARACTERISTICS 1970 CENSUS AND 1974 PENNSYLVANIA RECREATION SURVEY

	1970 Census	1974 Pennsylvania Recreation Survey
Population 5 and over	100.0	100.0
Sex:		
Male	47.8	46.7
Female	52.2	53.3
Race:		
White	91.3	95.3
Nonwhite	8.7	4.7
Education, population 25 and over:		
Less than 9 years	29.1	13.0
9 - 11 years	20.6	15.9
12 years	34.5	45.9
Some college	7.0	12.1
College graduates	8.8	13.1
Age:		
5 to 9 years	10.0	7.9
10 to 14 years	10.8	9.7
15 to 19 years	10.0	9.9
20 to 24 years	7.7	8.5
25 to 29 years	6.5	7.3
30 to 34 years	5.6	6.2
35 to 44 years	12.6	14.6
45 to 54 years	13.9	14.2
55 to 64 years	11.2	11.3
65 to 74 years	7.3	7.5
75 years or older	4.4	2.9
Car ownership of households:		
Own car	80.1	93.7
Do not own car	19.9	6.3
Income of households:		
Less than $4,000	26.2	11.3
$4,000 to $6,999	17.2	14.2
$7,000 to $9,999	20.3	26.7
$10,000 to $14,999	22.1	25.6
$15,000 to $24,999	11.1	16.8
$25,000 and over	3.1	5.4

directories, which were organized by groups of localities and had, therefore, some geographical stratification but not as much as exchange-organized directories, were allowed to have a compromise cluster length of 25 listings. A total of 2, 181 clusters were selected.

The number of listings to be selected from a directory was divided by the chosen cluster length for the directory to determine the number of clusters to be selected. A sampling interval within the directory was then determined and clusters were selected systematically. Clusters were examined to detect obviously nonresidential listings, which were eliminated.

The remaining residential listings were then keypunched onto punch cards along with their area code and directory number. In many cases, telephone exchanges appeared in more than one directory, even after duplicate directories had been eliminated. To prevent such exchanges from being overrepresented because they appeared in more than one directory, the punch card file was examined by computer. For each telephone exchange, the number of directories in which the exchange appeared was determined. If an exchange appeared in three directories, for example, then only every third listing in that exchange was taken. At the same time that exchanges were checked for duplications, listings themselves were checked for duplication and duplicates were eliminated. 38,336 telephone listings were input to the process. Of these, 264 listings were found to be duplicates and were eliminated. After selection of listings to compensate for duplicate exchanges, 29,468 sample listings remained. The total number of telephone exchanges actually appearing in the sample of completed interviews is 912.

The 29,468 sample listings were arranged in subsamples of 100 listings each in such a way that each subsample is representative of the State as a whole. It was not known at the outset what fraction of the 29,468 listings would be required to obtain the number of interviews needed. Through the device of dividing the sample into representative subsamples, however, it was possible to proceed through the subsamples and simply stop when the desired number of interviews had been obtained and still have a representative sample at any stopping point.

Since the sample was stratified by area code and exchange, the reduction in sampling error associated with the fine geographical stratification greatly outweighs the increase in sampling error attributable to clustering. Therefore, estimates of sampling error based on simple random sampling tend to overstate the sampling error.

The following formula, therefore, presents high side estimates of the sampling error of survey percentages:

$$\sigma_{p'} = \sqrt{\frac{p\,(1-p)}{n-1}} \quad \text{where}$$

$\sigma_{p'}$ = sampling error of a survey proportion

p = the survey proportion

n = the sample count on which the survey proportion is based.

Table A2

SAMPLING ERRORS (ONE SIGMA) IN PERCENTAGE POINTS

	Survey percentage					
Base of percentage	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
20	5.0	6.9	9.2	10.5	11.2	11.5
50	3.1	4.3	5.7	6.5	7.0	7.1
100	2.2	3.1	4.0	4.6	4.9	5.0
200	1.5	2.1	2.8	3.2	3.5	3.5
400	1.1	1.5	2.0	2.3	2.5	2.5
1,000	0.7	0.9	1.3	1.4	1.5	1.6
2,000	0.5	0.7	0.9	1.0	1.1	1.1
3,000	0.4	0.5	0.7	0.8	0.9	0.9

The above table is used as follows: select the row with the respondent count approximately equal to the base of the percentage; pick a column corresponding to the survey percentage. The figure in the cell corresponds to the one sigma error range above or below the percentage in the column head. The probability is approximately 68 in 100 that the true percentage will fall within plus or minus one sigma of the survey percentage, and 95 in 100, within two sigma.

Thus, for example, a survey proportion of 40% based upon a sample of 100 respondents may be expected to represent a true figure between 35.1% and 44.9% in 68 cases out of 100.

A minimum of 4 calls were made to each telephone number used before dropping it because of inability to make contact. In the process of counting the 4 calls, busy signals represented 1/3 of a call. In this way, a bias toward respondents who were at home and used their phones less was reduced. Having contacted a household, at least 3 additional calls were made, if necessary, to reach a specific individual designated for interview. Times and days of calls were noted so that interviewers could choose times to call back when they were most likely to be successful.

The household interview consisted of two parts, a recreation participation part and a household characteristics part. The individual in the household selected for interview with respect to recreation participation was selected at random from all household members 5 or more years old. For each telephone listing, interviewers were provided with a different set of random numbers which designated the individual to be interviewed for each possible household size. If the individual selected was incapable of being interviewed by virtue of deafness or some other condition, e.g., mentally retarded, an adult member of the household who was knowledgeable about the subject's recreation participation was allowed to speak for the subject. Moreover, if the subject of the interview was between the ages of 5 and 10, an adult was allowed to speak for the subject.

A head of household was interviewed for the household characteristics part of the household interview. Frequently, obtaining this information required that a household be contacted again to reach a head of household. Because of the length of the interview itself and because normally more than one person in the household would have to be contacted, the opportunity for refusal at some point along the line was increased. Refusals at all stages of the interview process constituted 32% of the total of completed interviews plus refusals.

Questionnaire No. ____________ -0 ____ 1-5(01)

HC **ID** **HD** **DQ** **R**

NE ____________ 8

Interviewer ______________________________

Telephone No. ____ - ____ - ________ AE9-12

Date Completed ______________________________

Sample No. __________ Line No. ______ S13-15

OUTDOOR RECREATION SURVEY

INTRODUCTION: Good morning/afternoon/evening. My name is Ms./Mr. ______________________________ .

The Office of State Planning and Development is conducting a telephone survey across Pennsylvania that will be used by the State in planning for better public recreation facilities.

Are you a head of this household?

(IF YES – GO TO QUESTION 1.)

(IF NO) May I please speak with a head of the household?

(REREAD INTRODUCTION TO HEAD OF HOUSEHOLD. GO TO QUESTION 1. IF NO HEAD OF HOUSEHOLD IS AVAILABLE, ASK WHEN WOULD BE A GOOD TIME TO CALL BACK AND TERMINATE CALL).

1. Including yourself, how many members of this household now live at home?

   1 2 3 4 5 6 7 8 9 10 or more -x — 16

2. In order from the oldest to the youngest, please tell me the age and sex of each household member who is now living at home.

Age (Write In)	Office Use	Sex M	Sex F	Household head(s)	Subject of Interview	
________	________	1	2	H	1	
________	________	1	2	H	2	AH 17
________	________	1	2	H	3	AS 18
________	________	1	2	H	4	SS 19
________	________	1	2	H	5	
________	________	1	2	H	6	
________	________	1	2	H	7	
________	________	1	2	H	8	
________	________	1	2	H	9	
________	________	1	2	H	10	

Who is the principal head of this household? (INDICATE PRINCIPAL HEAD BY CIRCLING "H" CODE. INDICATE SECONDARY HEAD BY UNDERLINING "H" CODE.)

DETERMINE SUBJECT OF INTERVIEW USING SELECTOR NUMBERS IN SAMPLE LISTING, BASED ON THE NUMBER OF HOUSEHOLD MEMBERS 5 OR MORE YEARS OLD. CIRCLE SUBJECT'S NUMBER.

IF SUBJECT OF INTERVIEW IS 10 OR MORE YEARS OLD, ASK TO SPEAK TO SUBJECT. REREAD INTRODUCTION TO SUBJECT, GO TO QUESTION 3.

IF SUBJECT OF INTERVIEW IS NOT AT HOME, MAKE APPOINTMENT FOR CALL-BACK, AND TERMINATE CALL.

IF SUBJECT OF INTERVIEW IS LESS THAN 10 YEARS OLD OR IS UNABLE TO ANSWER FOR HIMSELF - - e.g., deaf, dumb, etc. - - CONTINUE INTERVIEW WITH A HEAD OF HOUSEHOLD.

READ: I would like to ask about the recreation activities of (SUBJECT).
What is (his/her) name?

GO TO QUESTION 3. READ QUESTIONS USING SUBJECT'S NAME.

Subject's name ______________________________

3. This past Saturday or Sunday did (you/subject's name):

(READ LIST, ONE AT A TIME - - CIRCLE CODE(S).)

-1 visit a museum or zoo,
-2 attend a cultural event or concert, or
-3 attend a live amateur or professional sporting event?

-0 NONE OF THESE. 20

4. I am going to read you a short list of recreation activities. Please think back to the most recent Sunday when you had good weather. Please tell me whether or not (you/subject's name) did any of these activities on that Sunday.

(READ LIST, ONE ACTIVITY AT A TIME:

"Did (you/subject's name) ACTIVITY ?")

(IF YES) Was that in Pennsylvania?

5. (MARK SUNDAY ACTIVITIES "YES" FOR Q5. FOR ACTIVITIES NOT MARKED "YES" ASK:)

Once again I am going to read you a short list of recreation activities. This time as I read them I would like you to think back over the past year, that is the period between now and this time last year. Please tell me whether or not (you/subject's name) ever did any of these activities during that time.

(READ LIST, ONE ACTIVITY AT A TIME:

"Did (you/subject's name) ACTIVITY ?")

6. Among the activities which (you/subject's name) did in the past year, are there any which (you/subject's name) had never done before the past year?

(IF YES) Which activities?

7. (READ FOR EACH ACTIVITY NOT MARKED "YES" FOR Q4, or 5.)

(Are you/do you think subject's name is) at all interested in (going/playing) ACTIVITY ?

(IF YES) What has prevented (you/subject's name) from ACTIVITY ?

8. Among the activities which (you/subject's name) did not do in the past year, are there any which (you/subject's name) definitely (plan/plans) to do in the coming year?

(IF YES) Which activities?

9. (READ FOR EACH ACTIVITY MARKED "YES" FOR Q4, or 5.)

On how many different days during the past year did (you/subject's name) ACTIVITY ?

(IF RESPONDENT DID ACTIVITY SO MANY TIMES HE HAS TROUBLE ESTIMATING:

You don't have to give me a number. For example, if (you/subject's name) went swimming every day of a two-week vacation, you can just tell me that. About _______ days then? Or does that sound too high or too low?

(Were you/Was subject's name) always in Pennsylvania when (you/subject's name) ACTIVITY ?

(IF NO) On how many different days did (you/subject's name) ACTIVITY in Penna.?

(FOR SWIMMING, TENNIS, BASKETBALL, AND ICE SKATING ONLY - -

Did (you/subject's name) ACTIVITY indoors at all? (IF YES) On how many different days did (you/subject's name) ACTIVITY indoors?

YrD ____________________ 16-18 19
PaD ____________________ 20-22 23
IndD ____________________ 24-26 27

5,6
C02 Swimming
C03 Picnicking
C04 Boating
C05 Fishing
C06 Hunting
C07 Tennis
C08 Golf
C09 Basketball
C10 Baseball
C11 Football
C12 Street hockey
C13 Bicycling
C14 Horseback riding
C15 Hiking
C16 Camping
C17 Motorcycles or snowmobiles
C18 Sightseeing or driving for pleasure
C19 Snow skiing
C20 Ice skating

10. Now, please think about the most recent time (you/subject's name) ACTIVITY .

a. Was that in Pennsylvania? -1 Yes -0 No 28

b. Was that on a holiday weekend, regular weekend, or regular week day?

-1 Hol. WE -2 Reg. WE -3 Reg. WD 29

c. Was that on a vacation, overnight trip, all-day outing, or a time when (you/subject's name) had no more than a few hours available?

-1 Vacation -2 Overnight -3 All-day -4 Few hours 30

BICYCLING ONLY - - Did (you/subject's name) ride the bicycle from home?

-1 Yes (GO TO NEXT ACTIVITY) -0 No 31

SIGHTSEEING AND DRIVING FOR PLEASURE - - GO TO NEXT ACTIVITY

d. What kind of place was that? ____________________ 32-35

BOATING ONLY - - Was that in a canoe or raft? -1 Yes -0 No 36

(IF NOT A PUBLIC FACILITY) Is there a public tax-supported facility in your area where (you/subject's name) can ACTIVITY ?

-1 Yes -0 No (SKIP TO e.) -2 DK (SKIP TO e.) 37

(IF YES) Why didn't (you/subject's name) go there?

____________________ 38-39

(IF ACTIVITY WAS DONE IN RESPONDENT'S OWN BACKYARD, GO TO NEXT ACTIVITY.)

e. When (you/subject's name) ACTIVITY (were you/was subject's name) inconvenienced or bothered by over-crowding? -1 Yes -0 No 40

f. What means of transportation did (you/subject's name) use to get from home to the place where (you/subject's name) ACTIVITY ? ____________________ 41

g. How long did it take to get from home to the place where (you/subject's name) ACTIVITY ?
____________________ (IF 10 MIN. OR LESS, SKIP TO i.) 42

h. If the place where (you/subject's name) ACTIVITY were only half as far away as it actually is, (would you/do you think subject's name would) ACTIVITY

-1 Much more often -2 Slightly more often -3 About as often as now -4 (less) 43

i. Is there anyplace closer to home where (you/subject's name) could have ACTIVITY ?

-1 Yes -0 No (SKIP TO j.) -2 DK (SKIP TO j.) 44

(IF YES) What kind of place for ACTIVITY is closest to home?

____ 45-48

How long does it take to get there? ________________ 49

Why didn't (you/subject's name) go there? ________________________ 50-51

j. (IF DIDN'T USE PUBLIC TRANSPORTATION IN f.)

Is there public transportation available to the place where (you/subject's name) ACTIVITY ?

-1 Yes -0 No -2 DK 52

(IF YES) What prevented (you/subject's name) from using it?

____ 53-54

(IF NO or DK) If public transportation were made available, would (you/subject's name) use it?

-1 Yes -0 No 55

(IF YES) If public transportation were made available (would you/do you think subject's name would) ACTIVITY 56

-1 Much more often -2 Slightly more often -3 About as often as now
-4 (Less)

GO TO NEXT ACTIVITY OR BACK TO Q11 IN MAIN QUESTIONNAIRE

11. Are the outdoor recreational facilities at the public school nearest to your home available to the public after school-hours and during the summer?

-1 Available -2 Not available -3 Don't know

(IF AVAILABLE) (Do you/Does subject's name) use these facilities?

-4 Yes -5 No

(IF NOT AVAILABLE) If they were made available to the public (would you/do you think subject's name would) use these facilities?

-6 Yes -7 No 52

(REMAINDER OF INTERVIEW IS FOR A HEAD OF HOUSEHOLD. IF RESPONDENT IS NOT A HEAD OF HOUSEHOLD, ASK TO SPEAK TO A HEAD OF HOUSEHOLD. IF NEEDED, REREAD INTRODUCTION. IF NO HOUSEHOLD HEAD IS AVAILABLE, MAKE AN APPOINTMENT TO CALL BACK AND TERMINATE THE CALL.)

12. Recreation improvements can be in the form of improved physical facilities, expanded recreation programs, better equipment, increased supervision, and so on.

Thinking now about the public schoolyard nearest to your home, what specific changes or improvements would you like to see to make the schoolyard more suitable for recreation?

____
____ 53
____
____ 54

13. Now, for the nearest small neighborhood park that you know of, what specific changes or improvements would you like to see?

____
____ 55
____
____ 56

14. What specific changes or improvements would you like to see in the nearest larger county or municipal park that you know of?

____
____ 57
____
____ 58

15. What specific changes or improvements would you like to see in the nearest state park that you know of?

____
____ 59
____
____ 60

READ: Different kinds of families have different recreation needs. So that we can learn mone about how recreation needs differ, we would like to ask some questions about you and your family.

16. Do you or does anyone now living there have a car?

-1 Yes (SKIP TO Q17)   - No

(IF NO) Do you have a camper or a truck that you use like a car?

-2 Yes   -0 No (SKIP TO Q18) 61

17. (IF YES FROM Q16) As you know, there have been recent increases in gasoline prices. These increases may have affected your travel and recreation, in terms of how often and how far you drive. Do you use the (car/camper/truck) in connection with recreation

-1 much less,   -2 slightly less, or   -3 about the same 62
compared to before gasoline prices went up?

18. In total, how many full-sized 2-wheel bicycles are owned by members of your household who are now living there? ____________ 63

(IF ONE OR MORE)

How many of these bicycles were acquired within the past 12 months? ____________ 64

19. (ASK IN REFERENCE TO SUBJECT OF INTERVIEW.)

In (your/subject's) formal education, what is the highest grade or year (you have/ subject's name has) completed? __________ 65

20. (ASK IF SUBJECT OF INTERVIEW IS NOT THE PRINCIPAL HEAD OF HOUSEHOLD.)

In (his/her) formal education, what is the highest grade or year the principal head of the household has completed? ________ 66

21. (ASK IN REFERENCE TO SUBJECT OF INTERVIEW.)

(Are you/Is subject's name) presently employed?

(IF EMPLOYED) Is that full-time or part-time?

-1 Full-time -2 Part-time

(IF NOT EMPLOYED) (Are you/Is subject's name) out of work, retired, a student, or a housewife?

-3 Out of work -4 Retired -5 Student -6 Housewife -7 Disabled 67

22. (ASK IF SUBJECT OF INTERVIEW IS NOT PRINCIPAL HEAD OF HOUSEHOLD.)

Is the principal head of the household presently employed?

(IF EMPLOYED) Is that full-time or part-time?

-1 Full-time -2 Part-time

(IF NOT EMPLOYED) Is the principal head of the household out of work, retired, a student, or a housewife?

-3 Out of work -4 Retired -5 Student -6 Housewife -7 Disabled 68

23. In what county are you located? ____________ ________________ 69-70

24. It is very important for us to find out how well public recreation programs serve families at different income levels.

Is your approximate total family income between $7,000 and $10,000, or is it higher or lower?

(LOWER) Is it higher or lower than $4,000?
    (LOWER = Less than $4,000)
    (HIGHER = $4,000 - $6,999)
(HIGHER) Is it higher or lower than $15,000?
    (LOWER = $10,000 - 14,999)
    (HIGHER) Is it higher or lower than $25,000?
        (LOWER = $15,000 - 24,999)
        (HIGHER = $25,000 and over)

CIRCLE CODE:
-0 Less than $4,000
-1 $4,000 - 6,999
-2 7,000 - 9,999
-3 10,000 - 14,999
-4 15,000 - 24,999
-5 25,000 and over
-6 Refused, not available 71

25. What is your race? -1 White -2 Black -3 Other 72

26. Many people have physical or health conditions which may affect their day-to-day activities. Have you, or has anyone living home with you, had any of the following conditions for at least a year?

a. Is anyone confined to a wheelchair? -1 Yes - No

b. Is anyone required to use braces, crutches, or a walker? -2 Yes - No

c. Is anyone blind or nearly blind? -3 Yes - No

d. Is anyone deaf or nearly deaf? -4 Yes - No

e. Does anyone have a coordination disability such as palsy? -5 Yes - No

f. Does anyone have a heart or lung disability which limits their activity? -6 Yes - No

g. Is anyone emotionally disturbed? -7 Yes - No

h. Is anyone mentally retarded? -8 Yes - No 73

(IF ALL RESPONSES ARE "NO", THE INTERVIEW IS FINISHED. THANK RESPONDENT AND TERMINATE CALL.)

27. (READ FOR EACH "YES" CONDITION IN Q26.)

What is the age and sex of the household member who CONDITION ?

Condition(s) (WRITE LETTER)	Age (WRITE IN)	Office Use	Sex	
			M	F
________	________	________	1	2
________	________	________	1	2
________	________	________	1	2
________	________	________	1	2
________	________	________	1	2
________	________	________	1	2

(ADMINISTER SERIES OF "DISABLED" QUESTIONS FOR EACH HOUSEHOLD MEMBER IDENTIFIED IN Q27 WHO IS 5 OR MORE YEARS OLD. IF MORE THAN ONE HOUSEHOLD MEMBER IS DISABLED, INTERVIEW FOR EACH OF THEM, ONE AT A TIME. IF DISABLED RESPONDENT IS LESS THAN 10 YEARS OLD OR IS UNABLE TO ANSWER FOR HIMSELF, A HEAD OF HOUSEHOLD MAY ANSWER FOR HIM.)

No. of activity sheets ________ 74-75

ANSWER SHEET FOR QUESTIONS 4 THRU 9

	Q4		Q5	Q6	Q7			Q8	Q9		
	C21	c22	c23	c24	c25			c34			
	Sun. Yes	Sun. Pa.	Yr. Yes	1st Yr.	Int.	What prevented		Plan	Yr. Days	Pa. Days	Indoor Days
Swimming	-2	-2	-2	-2	-2	26	Swimming	-2	C02		
Picnicking	-3	-3	-3	-3	-3	27	Picnicking	-3	C03		
Boating, canoeing, or Waterskiing	-4	-4	-4	-4	-4	28	Boating	-4	C04		
Fishing	-5	-5	-5	-5	-5	29	Fishing	-5	C05		
Hunting or sport-shooting	-6	-6	-6	-6	-6	30	Hunting	-6	C06		
Tennis	-7	-7	-7	-7	-7	31	Tennis	-7	C07		
Golf or miniature golf	-8	-8	-8	-8	-8	32	Golf	-8	C08		
Basketball	-9	-9	-9	-9	-9	33	Basketball	-9	C09		

	Q4		Q5	Q6	Q7			Q8	Q9		
	c35	c36	c37	c38	c39			c51			
	Sun. Yes	Sun. Pa.	Yr. Yes	1st Yr.	Int.	What prevented		Plan	Yr. Days	Pa. Days	Indoor Days
Baseball or softball	-0	-0	-0	-0	-0	40	Baseball	-0	C10		
Football	-1	-1	-1	-1	-1	41	Football	-1	C11		
Street hockey	-2	-2	-2	-2	-2	42	St. hockey	-2	C12		
Bicycling	-3	-3	-3	-3	-3	43	Bicycling	-3	C13		
Horseback riding	-4	-4	-4	-4	-4	44	Horseback	-4	C14		
Hiking or nature walks	-5	-5	-5	-5	-5	45	Hiking	-5	C15		
Camping	-6	-6	-6	-6	-6	46	Camping	-6	C16		
Off-road motorcycling (or riding snowmobiles)	-7	-7	-7	-7	-7	47	Motorcycling	-7	C17		
Sightseeing or driving for pleasure	-8	-8	-8	-8	-8	48	Sightseeing	-8	C18		
Snow skiing	-9	-9	-9	-9	-9	49	Skiing	-9	C19		
Ice Skating	-x	-x	-x	-x	-x	50	Skating	-x	C20		

OUTDOOR RECREATION SURVEY: DISABILITY SUPPLEMENT
QUESTIONS FOR DISABLED PERSONS

Questionnaire No.____________________ 1-5(02)

Telephone No.____________________ AE9-12

Sample No._________ Line No._________ S13-15

Interviewer____________________

Date Completed____________________

Subject's age:______________ 16

Subject's sex: -1M -2F 17

C18

CIRCLE CODE(S) FOR DISABILITY CONDITION(S)

-1	Confined to wheelchair
-2	Required to use braces, crutches, or a walker
-3	Blind or nearly blind
-4	Deaf or nearly deaf
-5	Coordination disability, such as palsy
-6	Heart or lung disability which limits activity
-7	Emotionally disturbed
-8	Mentally retarded

(IF RESPONDENT IS NOT SOMEONE YOU HAVE ALREADY BEEN INTERVIEWING, READ:

The Office of State Planning and Development is conducting a telephone survey across Pennsylvania that will be used by the State in planning for better recreation facilities.)

D1. We are particularly interested in the recreation needs of people with physical or other disabilities. I am going to read you a short list of recreation activities. As I read them I would like you to think back over the past year, that is the period between now and this time last year. Please tell me whether or not (you/subject's name) ever did any of these activities during that time.

(READ LIST, ONE ACTIVITY AT A TIME: "Did (you/subject's name) ACTIVITY ?")

D2. (READ FOR EACH "YES" ACTIVITY FROM D1.)

On how many different days during the past year did (you/subject's name) ACTIVITY ?

(Were you/Was subject's name) always in Pennsylvania when (you/subject's name) ACTIVITY ?

(IF NO) On how many days did (you/subject's name) ACTIVITY in Pa.?

D3. (READ FOR EACH "NO" ACTIVITY FROM D1.)

(Are you/Do you think subject's name is) at all interested in ACTIVITY ?

(IF YES) What has prevented (you/subject's name) from ACTIVITY ?

D4. (READ FOR EACH "YES" ACTIVITY FROM D1.)

a. Now, please think about the most recent time (you/subject's name) ACTIVITY . Did (you/subject's name) go alone, with family or friends, with a nurse or similar companion, or with an organized group, club, or team?

(IF AN ORGANIZED GROUP, CLUB, OR TEAM - - Was that a group especially for people with disabilities?)

b. The most recent time (you/subject's name) ACTIVITY was that at a public tax-supported or community-fund-supported facility?

(IF YES) At the place where (you/subject's name) ACITIVITY were there facilities or programs designed especially for people with disabilities?

D5. Many people with physical or other disabilities who would like to participate in recreation activities are prevented from doing so because of circumstances beyond their control.

a. Would you say that architectural or physical barriers are

-1 very important -2 important, or -3 not very important 19
in preventing (you/subject's name) from participating in recreation activities?

(IF NEEDED - - Physical barriers are things like rough trails, improperly designed rest rooms, and so on which act as barriers to many people with physical disabilities.)

b. What about difficulties associated with transportation?

Would you say they are

-1 Very important, -2 important, or -3 not very important 20

in preventing (you/subject's name) from participating in recreation activities?

c. What about the lack of special programs for people with disabilities?

Would you say they are

-1 very important, -2 important, or -3 not very important 21

in preventing (you/subject's name) from participating in recreation activities?

d. What about the fees and other costs associated with recreation activities?

Would you say they are

-1 very important -2 important, or -3 not very important 22

in preventing (you/subject's name) from participating in recreation activities?

e. What about attitudes and prejudices of non-disabled people towards people who do have disabilities?

Would you say they are

-1 very important -2 important, or -3 not very important 23

in preventing (you/subject's name) from participating in recreation activities?

D6. Generally speaking, when (you participate/subject's name participates) in recreation activities away from home, (do you prefer/do you think subject's name prefers) to be with other people who (are/have) CONDITION(S) or to be with the general public?

-1 with disabled -2 with public -3 no difference 24

D7. Do you know of any public tax-supported or community-fund-supported recreation facilities in your area with facilities or programs especially designed for people with disabilities?

(RECORD NAME OF EACH FACILITY, KIND OF PLACE - - COMMUNITY CENTER, STATE PARK, ETC. - - AND KIND OF SPECIAL FACILITY OR PROGRAM.)

D8. In (your/subject's) formal education, what is the highest grade or year (you have/subject has) completed? ______ 77

D9. (Are you/Is subject) presently employed?

(IF EMPLOYED) Is that full-time or part-time?

-1 Full-time -2 Part-time

(IF NOT EMPLOYED) (Are you/Is subject) out of work, retired, a student, or a housewife?

-3 Out of work -4 Retired -5 Student or preschool
-6 Housewife -7 Disabled 78

QD1 THRU QD4	c6-7 Card No.	QD1 c19 Yr. Yes	QD2 c20-22 Yr. Days	QD2 c24-26 Pa. Days	Int.	QD3 Card 02 What prevented		QD4a c28 Alone	QD4a c28 Family/ Friend	QD4a c28 Nurse	QD4a c28 Group	Other (SPECIFY)	QD4a c29 Dis. Grp.	QD4b c30 Pub. Fac.	QD4b c31 For Dis.
Swimming	C28	-1			-	25-26	Swimming	-1	-2	-3	-4		-1	-1	-1
Picnicking	C03	-1			-	27-28	Picnicking	-1	-2	-3	-4		-1	-1	-1
Boating, canoeing, or waterskiing . . .	C04	-1			-	29-30	Boating	-1	-2	-3	-4		-1	-1	-1
Fishing	C05	-1			-	31-32	Fishing	-1	-2	-3	-4		-1	-1	-1
Hunting or sport-shooting	C06	-1			-	33-34	Hunting	-1	-2	-3	-4		-1	-1	-1
Tennis	C07	-1			-	35-36	Tennis	-1	-2	-3	-4		-1	-1	-1
Golf or minature golf	C08	-1			-	37-38	Golf	-1	-2	-3	-4		-1	-1	-1
Basketball	C09	-1			-	39-40	Basketball	-1	-2	-3	-4		-1	-1	-1
Baseball or softball . .	C10	-1			-	41-42	Baseball	-1	-2	-3	-4		-1	-1	-1
Football	C11	-1			-	43-44	Football	-1	-2	-3	-4		-1	-1	-1
Street hockey	C12	-1			-	45-46	St. hockey	-1	-2	-3	-4		-1	-1	-1
Bicycling	C13	-1			-	47-48	Bicycling	-1	-2	-3	-4		-1	-1	-1
Horseback riding . . .	C14	-1			-	49-50	Horseback	-1	-2	-3	-4		-1	-1	-1
Hiking or nature walks	C15	-1			-	51-52	Hiking	-1	-2	-3	-4		-1	-1	-1
Camping	C16	-1			-	53-54	Camping	-1	-2	-3	-4		-1	-1	-1
Off-road motorcycling (or snowmobiles) . .	C17	-1			-	55-56	Motorcyc.	-1	-2	-3	-4		-1	-1	-1
Sightseeing or driving for pleasure	C18	-1			-	57-58	Sightseeing	-1	-2	-3	-4		-1	-1	-1
Snow skiing	C19	-1			-	59-60	Skiing	-1	-2	-3	-4		-1	-1	-1
Ice Skating	C20	-1			-	61-62	Skating	-1	-2	-3	-4		-1	-1	-1
*Bowling	C21	-1			-	63-64	Bowling	-1	-2	-3	-4		-1	-1	-1
*Museum or zoo . . .	C22	-1			-	65-66	Museum	-1	-2	-3	-4		-1	-1	-1
*Movie, play, or concert	C23	-1			-	67-68	Movie, etc.	-1	-2	-3	-4		-1	-1	-1
*Live sporting event .	C24	-1			-	69-70	Sports ev.	-1	-2	-3	-4		-1	-1	-1
*Group for cards or other games	C25	-1			-	71-72	Cards grp.	-1	-2	-3	-4		-1	-1	-1
*Group for arts and crafts	C26	-1			-	73-74	Crafts grp.	-1	-2	-3	-4		-1	-1	-1
*Social or discussion group	C27	-1			-	75-76	Social grp.	-1	-2	-3	-4		-1	-1	-1

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BOOKBINDING
MIDDLETOWN, PA.
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We're Quality Bound